

Sustaining Health Care Practice Change:
The Experience of Best Practice Spotlight Organizations Implementing and Sustaining
RNAO Best Practice Guidelines

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Abstract

Sustainability of change for improvement initiatives has been widely reported as a global challenge both within and outside health care settings. The purpose of this study was to examine the extent to which factors related to staff training and involvement, staff behaviour, and clinical leaders' and senior leaders' engagement and support impact the long term sustainability of practice changes for BPSO health care organizations who have implemented Registered Nursing Association of Ontario's (RNAO) Best Practice Guidelines. Semi structured interviews with eleven organizational leaders' from ten health care organizations were conducted to explore the unique experiences, views and perspectives on factors related to staff, clinical leaders and senior leaders and their involvement and impact on the long term sustainability of clinical practice changes within organizations who had implemented Registered Nursing Association of Ontario's (RNAO) Best Practice Guidelines (BPGs). The interviews were coded and analyzed using thematic content analysis. Further analysis identified patterns and themes in relation to: 1. The National Health Service (NHS) Sustainability Model which was used as the theoretical framework for this research; and 2. Organizations found to have sustained practice changes longer term verses organizations that did not.

Six organizations were found to have sustained practice changes while the remaining four were found to have been unsuccessful in their efforts to sustain the changes. Five major findings in relation to sustainability emerged from this study. First is the importance of early and sustained engagement and frontline staff, managers, and clinical leaders in planning, implementation and ongoing development of BPGs through use of working groups and champions models. Second is the importance of ongoing

provision of formal training, tools and resources to all key stakeholders during and after the implementation phase and efforts made to embed changes in current processes whenever possible to ensure sustainability. Third is to ensure staff and management are receptive to the proposed change(s) and/or have been given the necessary background information and rationale so they understand and can support the need for the change. Fourth is the need for early and sustained fiscal and human resources dedicated to supporting BPG implementation and the ongoing use of the BPGs already in place. Fifth is ensuring clinical leaders are trusted, influential, respected and seen as clinical resources by frontline staff. The significance of this study lies in a greater understanding of the influence and impact of factors related to staff on the long term sustainability of implemented practice changes within health care organizations. This study has implications for clinical practice, policy, education and research in relation to sustainability in health care.

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Chapter 1

Introduction

1.1 Introduction

Sustainability of change for improvement initiatives has been widely reported as a global challenge both within and outside health care settings. Most concerns within health care delivery systems about sustainability are related to the premature discontinuation or lack of on-going implementation of programs or practices after the initial period of support (Shediac-Rizkallah & Bone, 1998). Many of these change initiatives are in organizations as a result of an identified need or in an effort to improve the quality of care being delivered. However, when practices or programs are not sustained, in addition to the needs being left unmet, there is also waste of human, monetary and other infrastructural start-up investments in an already overburdened and under resourced health care system. Diminished trust and support for future programs with key stakeholders is also a significant consequence of the inability of organizations to sustain implemented practice changes (Shediac-Rizkallah & Bone, 1998).

This thesis examines sustainability of best practice guidelines (BPG) post initial implementation in health care organizations designated Registered Nursing Association of Ontario (RNAO) Best Practice Spotlight Organizations (BPSO). A literature review of the factors found to influence the sustainability of best practices within organizations after initial implementation was completed. Results of this review were used to support the selection of the National Health Service (NHS) sustainability model (Maher, Gustafson, & Evans, 2010) as the theoretical foundation for this research.

The thesis research is a qualitative descriptive study. BPSO project leaders in a variety of health care organization settings who were responsible for either the oversight or the initial implementation of practice changes and subsequent sustainability activities were interviewed for this study to more closely examine sustainability of practice changes. The study and interviews focused on the staff elements within the NHS model including the level of involvement and commitment of staff; clinical and senior leadership engagement and support in the implementation of the initial change; as well as in the subsequent sustainability efforts within each unique BPSO's context and setting.

1.2 Background

Graham et al. (2007) refers to knowledge translation (KT) as a “dynamic and iterative process that includes the synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of Canadians, provide more effective health services and products, and strengthen the healthcare system” (p. 936). Dissemination is the: “active process through which the information needs (pull) of target groups working in specific contexts (capacity) are accessed, and information is "tailored" to increase awareness of, acceptance of, and use of the lessons learned from science” (Kerner, 2007, p. 10).

Honorable ideas, but challenged by the realities of practice in health care today. Quality improvement has often taken longer than expected to take hold and longer still to become widely and firmly established within an organization (Ham et al., 2003). There is evidence that up to 70% of all organizational change fails to survive, an unacceptable failure rate for health care improvement (Daft & Noe, 2000). The most successful organizations are those that can implement and sustain effective improvement initiatives leading to increased quality and patient experience at lower cost (Maher, Gustafson, & Evans, 2007).

1.2.1 Research Utilizations and Evaluation of Practice Guidelines

The integration of research evidence into healthcare practices is a complex process that requires a multi-faceted approach. Much research has investigated the initial uptake of new practices in medicine (Grimshaw et al., 2001, as cited in Davies et al., 2008), less in nursing (Davies, Edwards, Ploeg, & Virani, 2008). Although there has been a recent increase in research about sustainability, few studies examining the persistence of change are noted in the medical and nursing literature and limited knowledge exists about factors that promote sustainability of guidelines at individual or organizational levels (Davies et al., 2008).

1.2.2 Registered Nursing Association of Ontario (RNAO) Best Practice

Guideline (BPG) Program Development

Nursing best practice guidelines provide a summary of quality research evidence with recommendations targeted to the scope of practice for nurses working in hospitals, home visiting services, public health departments, and long-term. Implementing clinical practice guidelines is an effective way to improve quality of care and services (Davies et al., 2008, p.1).

The Registered Nurses' Association of Ontario (RNAO) is a leader in producing nursing guidelines. Since 1999, with funding from the government of Ontario and the assistance of hundreds of nurses on expert panels with multi-disciplinary stakeholder review, "the association has systematically developed statements of recommended best practice in a specific area, designed to provide direction to practitioners in their practice" (Davies et al., 2008, p. 2). The overall objectives of the RNAO BPG project are to deliver effective care based on current evidence, to assist in resolving problems in a clinical setting, to achieve excellence in care delivery and to help introduce innovation into health care settings (RNAO Toolkit, 2012). In an effort to move research into practice and engage more

health care organizations and front line nurses to begin using the BPGs in their daily practice, the RNAO developed a Best Practice Spotlight Organizations (BPSO) program launched in 1999 (Davies et al., 2006). Health care organizations that are selected enter into a three year commitment with the RNAO. They are supported to implement, evaluate and share lessons learned from their BPG implementation experiences. As well, they are encouraged to participate in research. Selected organizations work closely with the RNAO learning and implementing BPGs. Some financial incentives are received by the BPSOs to ensure support for the project and the necessary training and mentoring to key staff involved. Upon successful completion of the implementation of several BPGs within a three year period, organizations are given the RNAO BPSO designation and continue their commitment to BPG implementation, evaluation and dissemination.

RNAO Spotlight Organizations spend valuable human and capital resources on efforts to close the knowledge gap through the implementation of clinical practice guidelines. In their study of sustained use of practice of guidelines in BPSOs following the initial implementation, Davies et al. (2006) found that nearly half of the participating health care organizations continued to implement RNAO best practice guidelines after two years and more than half sustained their use after three years.

1.3 Sustainability

1.3.1 Definition

Rogers (2003) defined sustainability as “the degree to which an innovation continues to be used after initial efforts to secure adoption is completed” (p. 429). Loman et al. (2010) define sustainability as the continued implementation of a practice at a level of fidelity that continues to produce intended benefits. Ham and colleagues in the UK identified

sustainability as an issue in the first wave of an evaluation of a major national improvement programme one year after the formal end date of projects and concluded that one third of the 24 pilot sites examined had not sustained the improvements gained (Ham, Kipping, McLeod, & Meredith, 2002). These insights led Lynn Maher (2010) and her team to develop a sustainability model and diagnostic assessment system to help support organizations to successfully sustain their practices changes. A more detailed description of sustainability from Maher et al., 2010 is as follows:

Not only have the process and outcome changed, but the thinking and attitudes behind them are fundamentally altered and the systems surrounding them are transformed as well. In other words the change has become an integrated or mainstream way of working rather than something ‘added on’. As a result, when you look at the process or outcome one year from now or longer, you can see that at a minimum it has not reverted to the old way of working, or old level of performance. Further, it has been able to withstand challenge and variation; it has evolved alongside other changes and perhaps has continued to improve over time. Sustainability means holding the gains and evolving as required - definitely not going back (p. 4).

For the purposes of this study, the following definition of sustainability was used:

“When new ways of working and improved outcomes become the norm” (Maher et al., 2010, p.4).

1.3.2 Importance of Sustainability

Effort to sustain practice changes and the degree to which evidence based practice (EBP) is adopted by staff following initial implementation is critically important to ensure the improvements made to practice are not lost and to “prevent the fading or decay of short term improvements” (Davies, Tremblay, & Edwards, 2010, as cited in Bick & Graham, p. 167).

Sustainability is not a steady, linear process. Rather, multiple determinants interact at variable rates depending on the contextual factors. These factors include receptivity to the new knowledge and capacity to interpret and apply the new knowledge by the

individual, an organization or a system (Davies & Edwards, 2009, as cited in Straus, Tetroe, & Graham (Eds.), p. 166).

In health care systems, change is the norm either through organizational changes or as a result of research generating new knowledge. Therefore, sustainability strategies need to build in processes that allow for the integration of new insights emerging from both the production of research knowledge and the experience of applying new knowledge (Davies, & Edwards, 2009, as cited in Straus, Tetroe, & Graham (Eds.)).

Rogers (2003) suggests that although sustainability is seen as important because innovations are valuable only if they continue to be used, researchers have paid little attention to sustainability. A systematic review of the diffusion of innovations in health organizations noted that only 2 of 1000 sources screened mentioned sustainability (Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou, 2004). This may be due to the fact many theories of planned change focus on shorter term perspectives. Also, a common view is that sustainability should be done toward the end of a project/program rather than at the outset. Thus, sustainability may be threatened if project leaders change or become disengaged (Davies et al., 2009). Sustainability planning is recommended early in the knowledge-to-action cycle, when practice change interventions are being designed (Davies et al., 2009). The literature suggests key strategies for successfully integrating research evidence into healthcare practices include: 1. Organizational commitment and active support from leadership and key stakeholders; 2. Recognition of the importance of change by the target group; 3. Having credible change agents; and 4. Empowering targeted staff to change (Davies et al., 2008).

1.3.3 Need for Further Research

A striking finding of an extensive review by Greenhalgh et al. (2004 1b) was the small number of studies that considered, let alone explicitly set out to study the complexities of sustaining innovation in service organizations. The authors note that most studies reviewed “failed to consider the interactions and contextual and contingent nature of the diffusion of an innovation” (Greenhalgh et al., 2004 1a, p. 614).

According to Greenhalgh et al. (2004 1b), evidence about sustainability is complex and difficult to disentangle from evidence on change management or organizational development in general. Greenhalgh et al. (2004 1a) suggests that future research should focus on explaining the complexity of successful adoption and routinization of innovation, as well as, processes leading to long term routinization of innovations.

1.4 Problem Statement

The current body of literature on the study of sustainability of specific programs or interventions within health care organizations is fragmented and underdeveloped (Stirman et al., 2012). Suggestions for future research in this field include follow up studies with organizations past the initial implementation phase to assess the degree to which the programs or practices are sustained and the nature and implications of changes that are made once implemented (Stirman et al., 2012).

The purpose of this study was to examine the experience of leadership in health care organizations in their efforts to sustain innovations or practice changes post implementation of the RNAO best practice guidelines. More specifically, it provides a close examination of factors related to staff that impact the long term sustainability of practice changes for these

health care organizations, including staff training and involvement, staff behaviour, and clinical and senior leaderships' engagement and support.

1.5 Research Question

To what extent do factors related to staff training and involvement, staff behaviour, and clinical leaders' and senior leaders' engagement and support impact the long term sustainability of practice changes for BPSO health care organizations who have implemented Registered Nursing Association of Ontario's (RNAO) Best Practice Guidelines?

1.6 Summary

In recent years, interest in sustainability has been of growing concern in health care and more attention has been paid to the long-term viability of programmes, as policy makers and funders become increasingly concerned with allocating scarce resources effectively and efficiently (Shediac-Rizkallah & Bone, 1998). Given these increasing pressures to improve the quality of care delivered and the challenges and costs associated with implementing quality improvement measures, it is imperative that the improvements are sustained. In an effort to add to the limited body of research that currently exists in the area of sustainability of practice changes, the thesis research closely examined the experiences and insights of project leaders in RNAO Best Practice Spotlight Organizations on the issue of sustainability of practice change.

In the second chapter, literature is reviewed regarding the factors that influence the sustainability of best practices within organizations post initial implementation. The National Health Service sustainability model (Maher et al., 2010) was the model selected to provide the theoretical foundation for the thesis research. Everett Rogers (2003) theory of

Diffusion of Innovations and Ian Graham's (2006) Knowledge to Action cycle are also briefly described in order to provide further theoretical foundation for this thesis research. In the third chapter, methods of the proposed qualitative descriptive study are described. The findings are presented in the fourth chapter and discussed in the fifth chapter.

Chapter 2

Literature Review

2.1 Introduction

This chapter reviews literature about the sustainability of practice change and guideline implementation in health care settings. Relevant theoretical models are described. First, Rogers' seminal Diffusion of Innovations (Rogers, 2003) theory of knowledge translation is summarized, with focus on aspects of sustainability. The Knowledge-to-Action process model (Graham et al., 2006), used by CIHR and many Canadian researchers, is briefly described. Finally, the NHS Model of Sustainability (Maher, Gustafson, & Evans, 2007) that guides the thesis research is explained, with particular attention paid to the staff elements within this model.

Four systematic reviews of research on sustainability of practice changes in health care settings are reviewed, followed by selected primary research on sustainability. Conclusions are drawn about the gaps in the research literature related to the barriers and facilitators to sustained change in health care organizations. Finally, research questions are proposed.

2.2 Knowledge Translation: Overview of Theoretical Models

Knowledge translation (KT) defined is “the exchange, synthesis and ethically-sound application of knowledge-within a complex system of interactions among researchers and users-to accelerate the capture of the benefits of research for Canadians through improved health, more effective services and products, and a strengthened health care system” (CIHR, 2009, p. 4).

Several theoretical models of KT were examined to determine which theoretical model should guide this thesis research. Although 11 of 31 models about knowledge translation describe a separate step subsequent to evaluation entitled sustaining ongoing change, very few studies have been conducted about the determinants of sustainability (Graham et al., 2007). Criteria for selecting the model were inclusion of sustainability as a key element of the model, clarity, and some research to support the sustainability element of the model.

The models that were evaluated in greater depth were: Rogers' (2003) Theory of Diffusion of Innovations; the Knowledge to Action Model (Graham et al., 2006); and the NHS Sustainability Model (Maher et al., 2007). The NHS Sustainability Model (2007) was chosen to provide the theoretical underpinnings for the thesis research. All three of these models have strengths related to sustainability and will be briefly described.

2.2.1 Diffusion of Innovation (Rogers (2003))

One of the most widely used theoretical approaches to the study of knowledge transfer is the Diffusion of Innovations model by Rogers (2003) first published in his 1962 book with the same title. Over the past five decades the original model has been modified and expanded based on further research and theoretical developments. He defines diffusion as “both the planned and the spontaneous spread of new ideas” acknowledging that it can be very difficult to get a new idea adopted, even one with obvious advantages (Rogers, 2003, p. 6.).

Rogers' (2003) identifies four main elements in his theory. Diffusion is described as a four step “process by which (a) an *innovation*; (b) is *communicated* through certain *channels*; (c) over *time*; (d) among members of a *social system*” (Rogers, 2003, p. 11).

An innovation is described by Rogers (2003) as “an idea, practice or object that is perceived as new by an individual or other unit of adoption” (Rogers, 2003, p. 12).

According to Rogers (2003), the relative advantage and compatibility of an innovation are the two most important attributes for explaining the likelihood of an innovation being adopted. He suggests that an innovation is more likely to be sustained when adopters are actively participating in customizing an innovation to fit their situation and to meet their need. Furthermore, innovation is likely to diffuse more rapidly and be sustained longer when the innovation is flexible and can be re-invented and adapted by the adopters.

The second step in the diffusion process is when an innovation is known or used by an experienced individual or organization and, through a communication channel, the message is sent to an individual or organization that is not aware of the innovation. Rogers (2003) suggests that diffusion is a very social process and that “most people depend mainly upon a subjective evaluation of an innovation that is conveyed to them from other individuals like themselves who have already adopted the innovation” (p. 19).

According to Rogers (2003), communication of new ideas is likely to be more effective when channels of communication are less formal (e.g. face to face interactions) and “when it occurs between two or more similar individuals (homophilous) who share common beliefs, education and socio economic status” (p. 19). However, according to Rogers, the challenge with diffusion of new ideas is that often the change agents are different (heterophilous) from those to whom they are introducing new ideas, resulting in difficulties in communication and acceptance of the new idea.

Rogers (2003) describes the third step of the diffusion of an innovation process as one that occurs over time. An individual or decision making unit goes from: (a) first knowledge of an innovation; (b) to persuasion and establishment of an attitude toward the innovation; (c) to the decision to adopt or reject the innovation; (d) to implementation; and (e) to the confirmation or reinforcement of the innovation decision. Research has shown that over time, increase can be seen in the number of individuals who adopt the innovation (Rogers, 2003).

Lastly, Rogers (2003) suggests innovations diffuse within the boundaries of a social system; the rate of adoption is influenced by the structure of the system norms and by the roles of opinion leaders, champions, and change agents within the social system. Furthermore, Rogers (2003) suggests that “influential persons can lead in the spread of new ideas or they can head an active opposition” (p. 27). Opinion leaders have generally earned the respect of others, so serve as models of behaviour.

Rogers (2003) discusses routinizing and sustainability. “Routinizing occurs when an innovation has become incorporated into the regular activities of an organization and has lost its separate identity. At that point the innovation process is complete” (Rogers, 2003, p. 429). Sustainability is “the degree to which an innovation continues to be used after initial efforts to secure adoption are completed” (Rogers, 2002, p. 429). Rogers’ (2003) further suggests that an important factor in explaining the degree to which an innovation is sustained by an organization is participation. Participation is defined as the “degree to which members of an organization are involved in the innovation process” (Green, 1986, as cited in Rogers, 2003, p. 429). Rogers (2003) further suggests that the degree to which an innovation is re-invented or modified by adopters as it diffuses, is

positively related to the innovation's sustainability. When an organization's members "change an innovation as they adopt it, they begin to regard it as their own, and are more likely to continue it over time, even when the initial special resources are withdrawn or diminish" (Rogers, 2003, p. 429). Re-invention or flexibility in the process of adoption was found to lead to a more rapid rate of adoption and to greater sustainability of the innovation.

2.2.2 Knowledge to Action Process (Graham)

The Knowledge to Action (KTA) Model developed by Graham et al. (2006) was adopted by CIHR as the model for application of research and the KT Process (CIHR, 2009; Straus, Tetroe & Graham, 2009). This model is relevant to the thesis because it is widely used in Canada and participants in this study were familiar with the model. It is used as the theoretical framework in the new RNAO Toolkit (2012) used by BPSO organizations to guide their implementation of BPGs.

Figure 2.1 The Knowledge-To-Action (KTA Model)

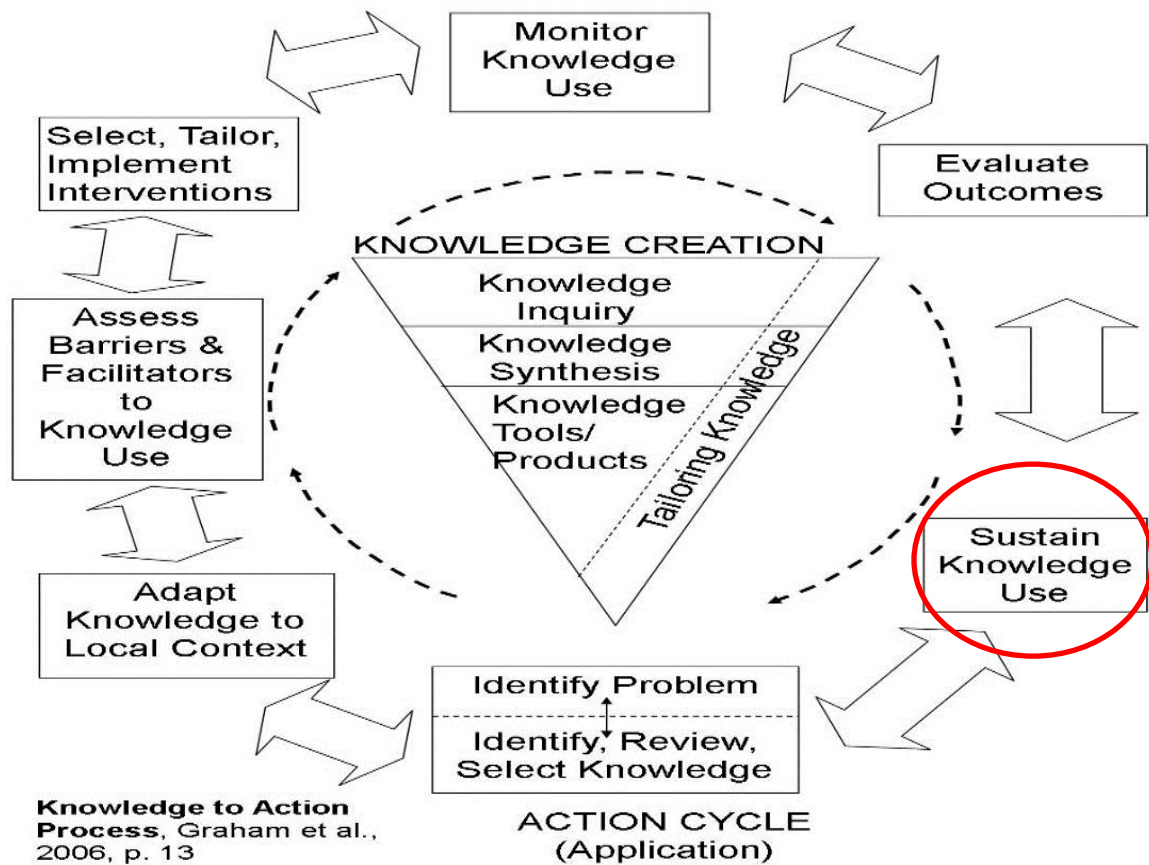


Figure 2.1. The Knowledge-To-Action (KTA Model) Adapted from Graham et al. (2006, p. 13).

Graham et al.'s (2006) knowledge to action cycle depicted in Figure 2.1 helps to illustrate the process from the initial creation of knowledge at the centre of the model, through to the tailoring of that knowledge into usable formats that are then adapted and implemented into local contexts, disseminated and monitored. As the cycle continues, knowledge use is then evaluated and measured in terms of adoption and sustainability.

The model conceptualizes the planning and effort required to influence the adoption of new knowledge, the need to assess the barriers and facilitators in order to

customize and re-package the innovation in order to achieve the desired practice change (Graham et al., 2006). And lastly, the model's cyclical depiction of the knowledge to action process illustrates the need to monitor and evaluate knowledge adoption and practice change if sustained long term use of the new knowledge or innovation is the desired outcome (Graham & Tetroe, 2007).

2.2.3 NHS Model of Sustainability

The National Health Service (NHS) Model of Sustainability was developed to support health care organizations in their efforts to sustain the implementation of innovation and practice changes (Maher et al., 2007). The model provides organizations with a systematic approach to evaluating and predicting the likelihood of the sustainability of their improvement initiatives (Maher et al., 2007). The accompanying NHS Sustainability Guide provides practical advice on ways to improve the likelihood of sustainability of improvement efforts through a detailed evaluation of the organization, its internal processes, and its staff and leadership (Maher et al., 2007).

The NHS Sustainability Model and Guide were co-developed by Lynn Maher from National Health Services (NHS) Institute for Innovations and Improvements in the United Kingdom and Professor David Gustafson and Alyson Evans from the University of Wisconsin-Madison in the USA (Maher et al., 2007). The model was developed drawing on knowledge from sustainability literature, research within the NHS, focus groups with over 250 point of care staff and health care experts, and work with NHS staff.

The goal was to develop an easy to use tool to help NHS improvement teams: (a) self-assess against a number of key criterion for sustaining change; (b) plan for

sustainability of improvement efforts; (c) recognize and understand key barriers relating to the specific local context; (d) identify strengths in sustaining improvement; (e) gain easy access to information to help overcome barriers; and (f) monitor progress over time (Maher et al., 2007).

The model is shown in Figure 2.2. Maher et al. (2007) set out with over 100 identified and ranked contributing elements and, following extensive regression analyses, reduced the number of elements to 10. The elements are clustered in three main components (process, staff, and organization) that play an important role in sustaining change in health organizations (Davies, Tremblay, and Edwards, 2010, p. 167).

Figure 2.2 NHS Sustainability Model

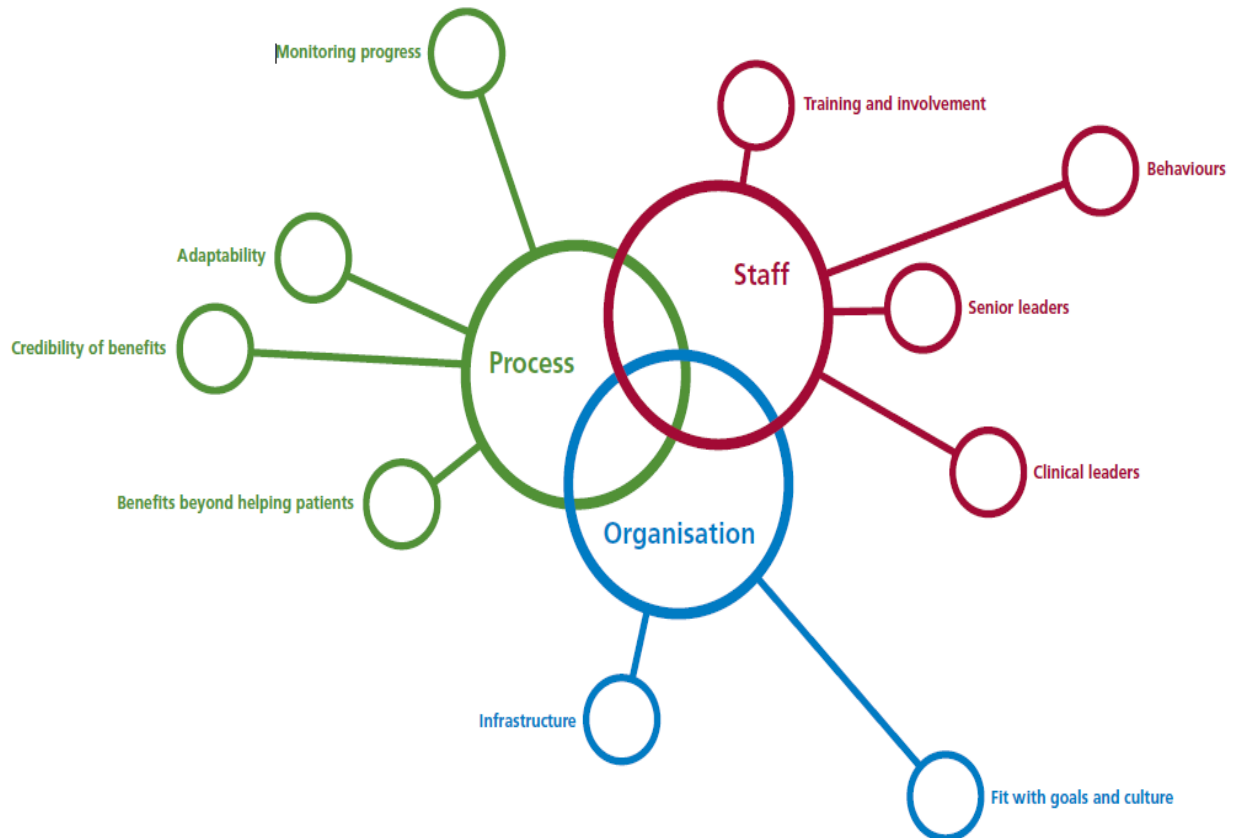


Figure 2.2. NHS Sustainability Model provides a brief description of the ten factors included within the NHS Sustainability Model that are included within the self-assessment tool outlined with guide (Maher et al., 2007).

The structure of the NHS Sustainability Model and Guide mirrors the three main components and ten key elements outlined in Table 2.1. Elements in the organization component include infrastructure as well as fit with organizational goals and culture. For the process component the elements are benefits beyond helping patients; credibility of benefits; adaptability; and monitoring progress. Finally, the staff component includes the relative influence of staff involvement and training, staff behaviour toward sustaining the

change, as well as senior and clinical engagement and leadership in the sustainability of practice changes in health care organizations (Maher et al., 2007).

Table 2.1

NHS Model's Main Components and Key Elements (Davies, Tremblay, and Edwards, 2010, p. 171-172)

Model Elements	Factors in Element	Description of Factors
Process	Benefits beyond helping patients	“The change improves efficiency and makes the job easier” (p. 171).
	Credibility of the evidence	“Benefits of the change are immediately obvious, supported by evidence and believed by stakeholders” (p. 171).
	Adaptability of improved process	“The process can be adapted to other organizational changes and there is a system for continually improving the process” (p. 171).
	Effectiveness of the system to monitor progress	“There is a system in place to identify evidence of progress, monitor progress, act on it and communicate results” (p. 171).
Staff	Staff involvement and training to sustain the process	“Staff have been involved from the beginning of change and adequately trained to sustain the improved process” (p. 172).
	Staff behaviours toward sustaining the change	“Staff feel empowered as part of the change process and believe the improvement will be sustained” (p. 172).
	Senior leadership engagement	“Organizational leaders take responsibility for efforts to sustain the change process, staff generally share information with, and actively seek advice from the leader” (p. 172).
	Clinical leadership engagement	“Clinical leaders take responsibility for efforts to sustain the change process, staff generally share information with, and actively seek advice from the leader” (p. 172).
Organizational	Fit with the organization's strategic aims and culture	“There is a history of successful sustainability and improvement when goals are consistent with the organizations strategic aims” (p. 172).
	Infrastructure for sustainability	“Staff, facilities and equipment, job descriptions, policies, procedures and communication systems are appropriate for sustaining the improved process” (p. 171).

2.2.4 Staff Elements

Developers of the NHS Sustainability Model suggest that future research is needed on the relative weights of components and elements of the model in different applications and settings (Davies, Tremblay, & Edwards, 2010). In the model, the staff component and staff elements are given the highest weight and, therefore, ranked as having the greatest impact on sustainability (Davies, Tremblay, & Edwards, 2010). This thesis examines the staff component and staff elements of the NHS Sustainability Model.

(a) Staff involvement and training.

Individual employees within an organization play a crucial role in healthcare improvement and staff being willing to take on change is the key to success and continuous improvement (Maher et al., 2010). According to this model, the active participation and involvement of staff can maximize the potential for achieving and sustaining the change. Employees improve their performance through experiencing more control over and involvement in their work, leading to an increase in personal commitment to management aims. One of the main reasons cited for hesitancy and resistance by staff to change is lack of involvement. Involvement can be defined as the staff contributing to the improvement process. Training and coaching point of care staff is often seen at the initial phases of implementation within a change program rather than an ongoing process (NHS Modernization Agency Improvement leader's guide to sustainability and spread, 2002). To ensure that skills and understanding are maintained, continual and effective support based on the needs of those working within the change system is needed if sustainability is desired. Lessons learned from project leads involved in the development of the NHS model suggests that they significantly underestimated the

amount of training required and advised doubling the expected amount of training (NHS Modernization Agency Improvement leader's guide to sustainability and spread, 2002). They also suggest involving frontline staff in identifying skills, developing the training programs, as well as assisting in the education and training of staff through the use of a train-the-trainer model (NHS Modernization Agency Improvement leader's guide to sustainability and spread, 2002). This approach allows the changed process to evolve, be maintained or be re-established "even if there are factors or crises that threaten to disrupt it and new staff will experience an appropriate and supportive induction training that includes the new ways of working" (NHS Modernization Agency Improvement leader's guide to sustainability and spread, 2002, p. 23).

(b) Staff attitudes (behaviours).

According to this model, staff feelings, attitudes and beliefs are central to any effort to achieve and sustain a change. The NHS model suggests that an understanding of the process of adoption is critical to managing staff behaviours toward change. The adoption process begins with having an awareness of a need, seeing ideas that generate interest and seem to meet the need, evaluating the ideas and coming to some conviction that they will meet the need, and taking action to change (NHS Modernization Agency Improvement leader's guide to sustainability and spread, 2002). According to the NHS Model, for change to take hold, staff must be encouraged to articulate their need for improvement, identify and evaluate their improvement ideas, and be active participants in the creation of conditions that can fill those needs and take a hold as sustained improvement (NHS Modernization Agency Improvement leader's guide to sustainability and spread, 2002). It is rare to see the adoption of new ideas within an organization take

hold instantly. The model authors advise that adoption begins with early adopters and that some people “hold out on adopting a new idea until the bitter end” (NHS Modernization Agency Improvement leader’s guide to sustainability and spread, 2002, p.38).

Examples of staff attitudes and behaviours that may negatively affect sustainability of the change include: (a) fear that the change will prevent them from achieving their personal goals; (b) change that will make daily work more difficult/complex; (c) staff lack of understanding about why the change is needed; (d) staff feel inadequately trained or insufficient in numbers to sustain the change; (e) the right people are not involved; (f) staff experiencing ‘change fatigue’; and (g) influential staff will not support the change in the long run (Maher et al., 2010, p. 45).

Skepticism about sustainability of the change may originate from staff involvement or lack of involvement during the change process (Maher et al., 2010). When people resist change “they are fighting to preserve something they care about, something they know, something they are good at and enjoy” (Senge, 1999, as cited in Maher et al., 2010, p. 56). “Skepticism at any level is important in practical terms because it may manifest itself as resistance” (Maher et al., 2010, p. 44).

(c) Senior leadership engagement.

Ham (2003) identified ‘organizational leadership’ as a significant factor for sustaining improvements (cited in NHS Institute for Innovation and Improvement, 2010, p. 52). The research about or on developing and implementing organizational change emphasizes the importance of support from senior leaders. Senge (1999) also comments

on the importance of leadership in sustaining change, with the focus on continual improvement so that organizations continually adapt and reinvent themselves.

There is a strong recognition that leadership is not necessarily hierarchical and leaders can come from different levels within organizations. An effective leadership model for sustaining change may include a chief executive, a project manager and a clinician, each with different but complementary roles. For example, the chief executive is necessary for strategic-level support; operational support is provided by a project manager; clinician leadership includes endorsing the change, influencing colleagues, and providing credibility at the staff level (Maher et al., 2010). According to the sustainability guide:

Any improvement initiative should have a senior sponsor and this sponsorship should continue as the initiative enters the sustaining phase. The start of a change initiative is often surrounded with celebration and enthusiasm, while the sustainability of the change is often perceived as less interesting and perhaps less dynamic. A consequence of this is that people become less involved in sustaining and building on the new process (Maher et al., 2010, p. 52).

(d) Clinical leaders.

According to this model, clinical leadership is vitally important to the sustainability of improvements in health care organizations. Because clinicians are required to change the way they work it is “vital to engage clinicians in the redesign process ensuring that new ways of working take account of clinicians’ priorities and needs” (Kilo, 1999, as cited in Maher et al., 2010, p. 54).

Successful clinical leaders have legitimacy among their clinical colleagues and are opinion formers. Clinical leadership is most successful when the clinical leaders are involved in the change and their support of the change process is visible, when their

actions and communication assist in breaking down barriers to the change, and when staff seek them out for advice and share information freely with them (Maher et al., 2010). They work in partnership with managerial leaders at both strategic and operational level. However, in order to remain a peer to point of care staff, it is important for a clinical leader to retain active clinical commitments and involvement.

There are three key factors that influence a clinical leader's support for sustaining a change: (a) their active participation in planning the implementation of the change; (b) their own personal confidence in their ability to adopt and sustain the change process within their current work environment; and (c) their belief in the relative advantages of the change (Maher et al., 2010).

2.3 Research about Sustainability

2.3.1 Literature Search

This section summarizes evidence from four systematic reviews and five primary research studies examining the sustainability of practice change in a variety of health care settings. Relatively few research studies were included in this literature review because few studies beyond what was included in the systematic reviews are available for review in the area of sustainability. Medline, CINAHL and Google Scholar were searched using key words such as sustainability, sustaining best practice implementation, long term practice change, change management, and long term process change.

2.3.2 Systematic Reviews

A systematic review was completed in 2004 to examine the existing literature on the diffusion, dissemination and sustainability of innovations in service organizations, more particularly health service delivery. The findings of this large review can be found

in two separate publications. The first publication is by Greenhalgh, Robert, Bate, Macfarlane, and Kyriakidou (2004 1b) and the second by Greenhalgh, Robert, Macfarlane, Bate and Kyriakidou (2004 1a). A summary of the findings of this extensive review as it relates to the NHS Model of Sustainability is presented here.

This review was commissioned by the Department of Health via the National Health Service Delivery and Organization Programme. A systematic meta-narrative review, defined as “the unfolding of a storyline of research in a particular scientific tradition” was conducted (Greenhalgh et al., 2004 1a, p. 583). The review covers a wide variety of literature on the spread and sustainability of innovations in health service delivery organizations. A broad search was completed and a ‘meta narrative mapping’ approach was then used to identify, classify and evaluate the results (Greenhalgh et al., 2004 1b, p. 8).

The authors describe a rigorous process of identifying literature across disciplines, data extraction, and narrative synthesis. The researchers’ search strategy was designed to concentrate on the service sector, particularly health care. Greenhalgh et al. (2004 1b) found that research meeting this criterion was sparse, so extended their search to include overview articles and empirical studies from outside the health sector if they had important methodological or theoretical lessons. The review provides contributions from various areas of study ranging from management and organizational psychology, to health promotion, knowledge utilization, evidence-based medicine and developmental studies. Four hundred and ninety five studies were included, with findings organized into 13 research areas, largely independent of one another.

Findings relevant to dissemination and sustainability of an innovation as described within this systematic review are summarized here through the lens of the theoretical models presented above.

To begin, it seems prudent to provide clarity on definitions for key terms used throughout this large systematic review because in this field of study definitions do tend to vary. Greenhalgh et al. (2004 1a) define innovation in service delivery and organizations as “a novel set of behaviours, routines, and ways of working that are directed at improving health care outcomes, administrative efficiency, cost effectiveness, or users’ experience and that are implemented by planned and coordinated actions” (p. 582). Greenhalgh et al.(2004 1a) distinguish between “diffusion (passive spread), dissemination (active and planned efforts to persuade target groups to adopt innovations), implementation (active and planned efforts to mainstream an innovation within an organization) and sustainability (making an innovation routine until it reaches obsolescence)” (p. 582).

The review concludes that the following elements are specifically associated with successful sustainability: (a) organizational structure; (b) leadership and management; (c) human resource issues; (d) funding; (e) intraorganizational communication; (f) interorganizational networks; (g) feedback; and (h) adaptation and reinvention (Greenhalgh et al., 2004 1a).

In order to clarify the links from the findings of this extensive review to the staff component of the NHS Sustainability Model, the conclusions from this review will be organized to align with the four main elements of the staff component which is the primary focus of this research.

Greenhalgh et al. (2004 1b) provides strong evidence linking the importance of staff involvement and commitment at all levels within an organization with the routinization of an innovation (Greenhalgh et al., 2004 1b). When staff is involved and able to provide input into the design of an innovation, there is a greater likelihood that the innovation will be feasible, easy to use and “if it improves task performance, it will be adopted more easily” (Greenhalgh et al., 2004 1a, p. 597).

Motivation, capacity and competence of individual practitioners were found to be key contributing factors to successful routinization of an innovation and achieved through appropriate, sufficient and ongoing staff training (Greenhalgh et al., 2004 1b). Strong evidence was found to suggest that when an innovation results in minimal changes to the job itself, when high quality and relevant training materials are made available and when on-the-job training is provided in a timely manner, successful and sustained implementation is more likely (Greenhalgh et al., 2004 1b). Furthermore, the use of ongoing feedback to staff about the consequences of the innovation was also found to support sustainability. These findings lend support to the NHS Sustainability Models’ assertion that staff involvement and training play an integral part in the sustainability of an innovation (Maher et al., 2007).

Staff behaviour and attitude are important elements of the NHS Sustainability Model. Staffs’ attitudes toward an innovation are shaped by their opportunity to provide feedback and input, their belief that the proposed change is a better way of doing things and whether they have been empowered to trial and test the innovation prior to implementation (Maher et al., 2007).

Strong evidence was found by Greenhalgh et al. (2004 1a) to support the conclusion that “innovations that are compatible with the intended adopters’ values, norms and perceived needs are more readily adopted” (p.596 1a). Successful assimilation can be further enhanced by ensuring the innovation is compatible with professional norms and ways of working within an organization (Greenhalgh et al., 2004 1a). By providing staff with regular opportunities to provide input and feedback throughout the change process, as well as opportunity to adapt, refine and or otherwise modify the innovation to suit their needs, Greenhalgh et al. (2004 1a) suggest the innovation will be more easily adopted and sustained. Maher et al. (2007) suggest that through empowering staff to test proposed innovations prior to implementation, sustainability can be more readily achieved. Greenhalgh et al. (2004 1a) supports this, concluding that “innovations with which the intended users can experiment on a limited basis are adopted and assimilated more easily” (p.592 1a).

Furthermore, interorganizational studies reviewed suggest the notion that staff within an organization form informal networks of communication with friends and colleagues and that these networks form strong channels of influence within the organization (Greenhalgh et al., 2004 1a). These informal social networks defined by Greenhalgh et al. (2004 1a) as “the pattern of friendship, advice, communication and support” among members of a social system are the dominant mechanism for diffusion (p. 601). Staff beliefs about an innovation or proposed change are communicated through these informal social networks within the organization and can strongly influence organizational norms and attitudes toward an innovation (Greenhalgh et al., 2004).

The engagement and support of clinical leaders who are trusted, respected and influential is another staff element in the NHS Sustainability Model and supported by research that demonstrates the power of social influence, such as that of an opinion leader, on the sustained use of an innovation. Expert opinion leaders influence others' beliefs and actions through authority and status, while peer opinion leaders are those who have developed credibility with their colleagues (Greenhalgh et al., 2004 1a).

Greenhalgh et al. (2004 1a) stated that it is important to identify the true opinion leaders within an organization to harness their influence on the beliefs and actions of their colleagues. Strong evidence was found to demonstrate that the adoption and sustained use of an innovation by individuals in an organization is more likely if key individuals, or champions, within their social networks are willing to support the innovation (Greenhalgh et al., 2004 1a).

The involvement of clinical leadership in change initiatives, as well as their understanding and support for the innovation have been identified as key elements for consideration within the staff component of the NHS Model of Sustainability (Maher et al., 2007). Despite the power of social influence in work environments, attempts to engage identified opinion leaders, either expert or peer, in change efforts have often had poor results, with only slight improvements noted when opinion leaders received some training in strategies to influence the behaviour of their peers (Greenhalgh et al., 2004 1a). An opinion leader is capable of positively or negatively influencing the outcome of a project (Greenhalgh et al., 2004 1a). Therefore, it can be concluded that garnering the support from the right opinion leader, either expert or peer, within an organization is a critical factor in the success of efforts to sustain innovation.

Senior leaderships' engagement in the change process is the last element within the staff component of the NHS Sustainability Model. A review of organizational psychology publications within this literature review points out that innovativeness within an organization is seen as “dependent on good leadership, sound decision making, and effective human resource management” (Greenhalgh et al., 2004 1a, p. 593). Top management support and advocacy of the implementation process, and continued commitment to the innovation was noted to be a strong indicator of the success of implementation and routinization of the innovation (Greenhalgh et al., 2004 1a). Furthermore, the innovation was more likely to be implemented and sustained if it aligned with goals of both top management and middle management and if the leaders within the organization were actively involved and consulted frequently throughout the implementation of the change (Greenhalgh et al., 2004 1a). Once again, these findings support the importance of senior leadership engagement and support found within the NHS Sustainability Model.

Greenhalgh et al. (2004 1b) systematic review concludes that the success of an initiative depends on the considerations of ten key factors:

1. the nature of the innovation (relative advantage, low complexity, scope for reinvention) and its fit with the organization's existing skill mix, work practices and strategic goals;
2. motivation, capacity and competence of individual practitioners;
3. elements of organizational structure (e.g. devolved decision making, internal networks) and capacity (e.g. change skills, evaluation skills);
4. resources and leadership;
5. early involvement and co-operation of staff at all levels;
6. personalized targeted and high quality training;
7. evaluation and feedback;
8. linkage with the resource system from development of the innovation through to implementation;
9. embeddedness in inter-organizational networks; and
10. conducive external pressures (e.g. synchrony with local priorities and policy making streams)(p. 220).

The NHS Sustainability Model's staff component encapsulates some of Greenhalgh et al. (2004 1b) ten key findings related to sustainability. Interestingly, five of the ten findings from this review focus on the importance of staff and leadership elements on long term sustained change, supporting this thesis and suggesting that factors related to staff heavily influence sustainability.

In summary, findings within these systematic reviews provide strong support for the key concepts within the staff component of the NHS Sustainability Model. The findings within these systematic reviews illuminate areas of concern and affirm themes in the literature for successful sustainability within organizations of innovations in health service delivery. The authors note that most studies failed to consider the interactions and contextual and contingent nature of the diffusion of an innovation (Greenhalgh et al., 2004 1a, p. 614).

Researchers Stirman et al. (2012) also set out to better understand the current state of research on sustainability through a broad review of studies that included examination of sustainability outcomes and factors that influenced the sustainment of an innovation or change program. Peer reviewed studies were included if published by July 2011 and if they examined sustainability of specific interventions or programs (e.g., outcomes measured after funding or initial implementation stopped). One hundred and twenty five studies were included.

Of the studies reviewed, 54% used a quantitative approach, 22% used a qualitative approach, and 23% used mixed methods (Stirman et al. (2012). The authors note that in light of the literature stating that self-report assessments are often inaccurate, 43% of the studies reviewed used self-report or interviews to assess sustainability or its

influences. Few studies that included independent observation or validation reported high rates of sustained implementation. Studies that reported on sustainability or fidelity at the provider level indicated fewer than half of the observed providers sustained the practices at a high level of skill, intensity or fidelity (Stirman et al., 2012).

Despite the noted limitations in the studies reviewed, several findings echoed the findings of Greenhalgh et al., (2004 1a) and align with the staff element of the NHS sustainability model. Studies examining the fidelity of a practice change at the staff level, revealed that less than 50% of providers continued the practice at high levels of fidelity suggesting the need for closer examination of “more fidelity-maintenance strategies such training and supervision, audit and feedback, building triggers into the process of care” (Stirman et al., 2012, p. 9). In addition, this review found that the capacity of the organization to sustain a change was supported by factors such as workforce stability and attributes (skills, attitudes), support or participation of key stakeholders, and funding (Stirman et al., 2012, p. 9).

Similar to Greenhalgh et al. (2004 1a), this systematic review (Stirman, et al., 2012) revealed several findings to support the strong influence of the staff elements on the sustainability of a process change or innovation. These results support that depending on staffs’ level of involvement and training, their attitudes toward the change, and the degree of leadership support and supervision, innovations will be adapted and redefined to meet the needs of the local context.

In the third systematic review on sustainability, the authors set out to complete a review that explored the “contextual factors influencing the sustainability of large scale quality improvement (QI) initiatives in developing countries” (Umar, Litaker, & Terris,

2009, p. 295). They identify contextual issues that may threaten sustainable change at regional and national levels. Thirty nine studies that focused on individual and level or facility level QI programs were included. The review was conducted using thematic analysis of text in the included studies.

When themes found within this review were compared to the other systematic reviews and to the staff elements of the NHS sustainability model, several similarities were noted and of particular importance to this study. In relation to the theme of integrating program changes into local context, key findings include the importance of early involvement of staff in the identification and prioritization of program goals, staff input into process changes, and having appropriate representation of internal stakeholders to ensure ownership and compliance with the program changes. Barriers to sustainability that are relevant to the NHS model staff element include the negative outcomes found when: (a) staff was poorly trained and prepared for the change; (b) there were insufficient staff available to support the program change; (c) there was evidence of non-compliance and loss of enthusiasm by both staff and leaders; (d) when early involvement or sense of ownership is lacking; and when there is premature reassignment of key project leaders and staff (Umar et al., 2009).

2.3.3 Primary Research

In a mixed methods study, Stetler, Ritchie, Rycroft-Malone, Schultz, & Charns (2009) examined the challenges of making an evidenced based practice (EBP) a reality, particularly at an organizational level and as a routine, sustained aspect of practice. Two nursing departments within two different hospital sites in different regions of the United States were selected for study. One site, labelled the role model site, was selected due to

its wide recognition among health care executives as demonstrating the capacity to successfully implement and sustain EBPs. The second site, labeled the beginner site, was selected through self-report to be at a very early stage of institutionalization of EBPs within their nursing department. These two sites were compared and contrasted using a theoretical model intended to examine the key contextual elements within a health care organization that support and facilitate the institutionalization of an EBP and the strategic processes used by the organization to support the institutionalize an EBP (Stetler et al., 2009).

While this case study provides an in depth look at the two sites under examination and the potential influences of their contexts on EBP routinization, the researchers' recognize a key limitation of this study being the examination of only 2 sites, with limited historical data and cautioned that "consideration should be made of the findings' theoretical transferability to other contexts, rather than their generalizability" (Stetler et al., 2009, p. 16).

As expected, the findings showed a marked difference between the sites with respect to the degree of success achieved in the institutionalization of the EBP (Stetler et al., 2009). The role model site was more "deliberatively and strategically building capacity to successfully implement and institutionalize EBP over a period of more than five years" (Stetler et al., 2009, p. 5). Specifically, attention had been paid to enabling change by providing staff with rationale and motivation for the need for the change, provision of defined methods for how the change would be implemented, and specific infrastructure and operational details to help staff successfully implement the change. Evidence of the priority given to the EBP was illustrated in the verbal communication

and in the use of EBP language in policies and procedure and other corporate documents (e.g., staff performance, vision/mission statements, and management incentives).

In addition, at the role model site the staff chosen as leaders for EBP were front line nurses with “long standing tenure” and involved with the project from the beginning with visible and ongoing commitment to the success of the project (Stetler et al., 2009, p. 5). Project leaders were identified by staff as influential leaders who “actively engage staff’s participatory EBP involvement” demonstrated by the number of staff in informal leadership roles related to the EBP at this site (Stetler et al., 2009, p. 11).

In contrast, the beginner site selected for study was in transition and in the early days of EBP institutionalization. Although the EBP under study had been initially implemented three years prior to the study, it “had yet to be adequately operationalized and thus realized as a routine” (Stetler et al., 2009, p. 5). In addition, the leaders in the project came after the initial project work had begun, EBP language was rarely heard and not seen as an “ongoing explicit priority or vision” (Stetler et al., 2009, p. 6). Nurses were not identified as leaders for the beginner site. Instead, the EBP leaders for this site were physicians more interested in the research aspects of the project, focused more on data collection and auditing of the EBP for use with external partners (e.g. other physicians) verses operationalization of the EBP in terms of improvement in professional practice for internal partners (e.g., nurses on the unit) (Stetler et al., 2009).

Stetler et al.’s (2009) findings support the staff component of the NHS model noting that “proactive, meaningful engagement of formal and informal leaders at all levels of the organization” (p.16) as well as the early and ongoing involvement of the majority of staff in EBP training and orientation were two key contextual elements

contributing to successful institutionalization of EBPs. This study further credits success to the greater number of “positive two-way inter-connections between key people leading change” (p.16) indicating a strong senior and clinical leadership with a staff mentoring component in place (Stetler et al., 2009). Lastly, both the NHS model and Stetler et al. (2009) agree on the importance of senior leadership’s engagement in the institutionalization of EBP through their proactive support and strategic vision that embeds innovation and best practice in the corporate culture (Stetler et al., 2009).

In their study, Davies, Edwards, Ploeg et al. (2006) explored the determinants of sustained use of research evidence in nursing practice. Their study evaluated whether the first 17 RNAO guidelines implemented from 2000-2004 were still being "sustained" in practice two years after a 6-month pilot implementation of the guideline. Data were collected and analyzed for the two-year post implementation phase based on the organizations’ sustainability status in the following areas: 1. Current practice; 2. Continuing education; 3. Policies and procedures; 4. Leadership; 5. Workplace culture; 6. Self-assessment on success of the project and sustainability (Davies et al., 2006, p. 18).

The study design included interviews and surveys of senior nurse administrators and frontline staff, site visits, and document reviews. Limitations as noted by the authors include limited funding that allowed only one site visit per guideline topic, impacting the triangulation of the data. In addition, the small sample size may limit power to detect significant differences in the analysis. Furthermore, measures used to assess organizational characteristics included items that were relevant to the organization as a whole as well as at the team or unit level so may lack the sensitivity in detecting factors at the team or unit level where the guidelines were implemented (Davies et al., 2006).

After two years, 43% of the organizations studied were successfully sustaining nursing best practice guidelines, and after three years, 59%. Expanded use of guidelines by spreading to other units or agencies, engagement of more partners, encouragement of multidisciplinary involvement, as well as the integration of guidelines into other quality improvement initiatives were also noted in the organizations that successfully sustained practice changes overtime (Davies et al., 2006).

There were several findings relevant to this thesis that aligns with the NHS Sustainability Model staff elements. “Leadership, defined as recognizable role models, leaders, champions or administrative support for the continued implementation of the guidelines, was the main predictor explaining 47% of variance in how strongly the guidelines have permeated the organization” (Davies et al., 2006, p. 3). Facilitators to the sustained use of practice change that are consistent with staff elements of the NHS model included: 1. Multidisciplinary involvement; 2. Staff buy-in and ownership; 3. On-going staff education; 4. Leadership by champions; 5. Management support (p. 22).

Davies et al. (2006) also identified the following barriers linked to staff elements of the NHS model: 1. Limited on-going staff education and changing staff; 2. Heavy workload and time limitations; 3. Staff resistance; 4. Lack of sustained leadership by champions; 5. Limited management commitment or support (p. 23).

In conclusion, Davies et al. (2006) found that most organizations who sustained their EBP had taken a long term perspective considering and acknowledging the time, resources and complexity required for ongoing support of EBP. The successful organizations had strong, engaged and consistent leadership, supporting the engagement

of multidisciplinary teams led by subject matter experts and champions sustained through ongoing education and development of the practice change.

Researchers Loman, Rodriguez, & Horner (2010) explored the variables that promoted the sustainability of a targeted intervention, the First Step to Success (FSS) program, for young students at risk for behavioural disorders. The purpose of the study was to identify variables that explained differences in 29 schools across 13 school districts with respect to continued implementation of the intervention at a level of fidelity that continues to produce intended benefits (Loman et al., 2010).

Under a third (28%) of school districts continued with the intervention 10 years after initiation (p. 178). The results indicated statistically significant difference between sustainers and non-sustainers with critical features related to long term sustainability identified as: (a) dedicated resources; (b) administrative support; (c) training and orientation; (d) highly qualified staff.

Of the 29 school districts reporting to have formally adopted the intervention, only 13 districts (45%) were able to identify a staff member with adequate knowledge of the intervention to complete the evaluation tool used for data collection. Schools that had retained staff with enhanced knowledge, training and experience from the initial program implementation were more likely to sustain their program longer term. Ongoing support for staff training through the use of well-trained coaches, development of program materials, and funds for staff training were all found to be sufficient to initiate the program but not adequate to sustain it. Furthermore, Loman et al. (2010) found “that staff buy-in of the program during adoption” (p. 187) was found to have played a

significant role for all schools that sustained the program but for very few schools that were unable to sustain the program.

Limitations of the study as identified by the authors include, the non-randomized selection of participants with only Oregon school districts studied, a limited sample size, and the use of a measure that does not have established reliability and validity for measuring sustainability of a program in schools (Loman et al., 2010).

In summary, the findings from this study designed to explore the variables that promoted the sustainability of a targeted intervention are consistent with other sustainability findings presented as well as with NHS Sustainability Model. Loman et al. (2010) reinforce the importance of ongoing support and resourcing from key decision makers for implemented programs, the importance of the initial design and adaptation of new programming to fit within an organizations' existing infrastructure, as well as, the importance of early involvement and engagement of staff, of well executed and ongoing staff training, and the effective use of data to provide regular feedback on program. (Loman et al., 2010).

In their qualitative descriptive study Smith-Higuchi, Downey, Davies, Bajnok & Waggott (2012) used the NHS sustainability framework to examine from an organizational perspective the activities conducted and resources used by seven health care organizations during the initial implementation of best practice guidelines. Researchers completed secondary analysis on narrative data found within reports submitted to the RNAO by BPSO candidates every year for three consecutive years.

These reports provided researchers with information related to the specific activities used by each organization to support BPG implementation, as well as specific

resources dedicated to their implementation within the first three years (Smith-Higuchi et al., 2012). The following findings related to the staff element of the NHS Sustainability Model were noted. In terms of staff involvement, all seven organizations reported planning some sort of motivational activities for staff (e.g. receptions for launch, contests) and developing BPG steering committees at time of implementation with membership including frontline staff, clinical leadership, and senior leadership (Smith-Higuchi et al., 2012). All BPSOs reported the recruitment and use of champions during the implementation phase (Smith-Higuchi et al., 2012). In relation to staff training, all BPSOs reported the development of some type of instructional materials along with the provision of some form of training ranging from formal presentations to more experiential learning (Smith-Higuchi et al., 2012). All reported embedding the new BPG into new staff orientation and use of RNAO Clinical Practice Fellowships as evidence of the involvement and commitment of their clinical leaders (Smith-Higuchi et al., 2012). However, less than half reported to have sought ongoing formal or informal input from staff to allow for modifications or adaptations post implementation, one reported sustaining their BPG steering committee permanently, and one reported to have used some form of staff feedback or evaluation following the training to determine its effectiveness (Smith-Higuchi et al., 2012).

The use of self-reports as the data source was cited as a limitation by the authors of the study, as these reports may not have included all the activities used during implementation nor the perceptions of participants as to their effectiveness in supporting BPG implementation (Smith-Higuchi et al., 2012). However, it provides further evidence of the validity of the NHS model as tool “relevant for examining guideline

implementation processes across a range of clinical settings” (Smith-Higuchi et al., 2012, p. 1713). Smith-Higuchi et al., (2012) were able to sort and organize specific BPG implementation activities used by a variety of health care organizations in direct relation to nine out of ten key factors within the NHS sustainability model.

In their study, Matthew-Maich, Ploeg, Dobbins & Jack (2013) examined the processes involved in the implementation and uptake of the RNAO Breastfeeding BPG in three acute care hospitals and the impact on clients, staff, the organizations, and the system as a whole. A constructivist grounded theory design was used in this qualitative study to conduct 120 interviews with 112 participants including patients, frontline staff, clinical experts and management from a variety of health care professional backgrounds employed within the three sites under study (Matthew-Maich et al., 2013). BPG uptake was noted in two of the three sites. Uptake or sustained practice change was demonstrated by “consistent use of the breastfeeding BPG in practice as reported by new mothers, nurses and other health professionals” (Matthew-Maich et al., 2013, p. 106). The SUNG framework (Matthew-Maiche, Ploeg, Dobbins, & Jack, 2012) was used as a framework and visual summary of the study’s findings. There are four main aspects of the SUNG framework: 1. Organizational processes; 2. Leadership processes; 3. Individual nurse processes; and 4. The impact of the process changes. The findings indicate “that BPG implementation and uptake in nursing required ongoing, multifaceted, tailored strategies by frontline leaders to foster individual and organizational change” (Matthew-Maich et al., 2013, p. 107).

Findings in relation to organizational processes included the importance of choosing BPGs that are relevant and perceived by staff as credible, the importance of

collaboration with staff and managers in the development of the implementation plan for the new BPG (e.g. educational materials, new forms for documentation) and including them in the actual implementation (e.g. development of educational materials, training and the development of new BPG related policies). Uptake sites used a variety of interactive and creative strategies to engage and educate staff (e.g. interactive group sessions, case studies, hands on skills sessions) and used innovative ways to embed the new BPG in already organizational structures and processes (e.g. agenda item at staff meetings, documentation forms, added to nurse and patient education materials). Uptake sites were also found to have conducted ongoing reviews of the BPGs and updated them based on what was working and not working (Matthew-Maich et al., 2013).

In terms of leadership processes, this study concluded that it was the “ongoing support by persistent, passionate frontline leaders” that was the difference in the uptake sites (Matthew-Maich et al., 2013, p 109). More specifically, frontline leaders were engaged and active participants in translating the BPGs into practice through their collaboration with staff to trial and adapt the new BPG as needed, through their involvement in staff education and training, through their mentoring, modeling and motivation of staff, and through their accountability for the BPG’s implementation.

Results related to individual nurse processes at the uptake sites indicated that frontline nursing staff “went through a “cascade of sequential, overlapping change” before adopting the new BPG (Matthew-Maich et al., 2013, 109). Uptake sites made efforts to shift nurses’ attitudes about “using practices based on personal experience or tradition to those based on research and evidence” ’ (Matthew-Maich et al., 2013, p. 109). The findings demonstrated the need for 1. Ongoing BPG activities beyond initial

implementation 2. To provide clear rationale behind the change. Nurses needed details on exactly what the change would involve and specifics on how the change would be implemented in their workplace (Matthew-Maich et al., 2013). Most nurses were found to be initially resistant and distrustful of the innovation and the perceived impact it would have on their workload. A trusted and credible leader and source (e.g. RNAO BPG) were both needed in order for nurses to trial the change. Once trialled, the nurses would receive immediate feedback related to the effectiveness of the practice change and improved patient outcomes, subsequently shifting their belief in and use of the BPG (Matthew-Maich et al., 2013). The examination of only one BPG in only one acute care settings were identified by the authors of the study as limitations, along with the possibility of recall bias and social desirability bias.

In summary, this study lends further support to the importance of addressing issues related to staff in practice change efforts when sustainability is the goal.

2.3.4 Summary of Literature Related to the Staff Element of the NHS Model

The results of this literature review demonstrate the complexity and multifaceted nature of sustaining practice change in a variety of settings. Research in the area of sustainability has demonstrated the importance of measured consideration of factors related to staff at all levels within an organization before implementing practice change. Some staff factors were noted to play varying degrees of importance in long term sustainability in organizations under study and found to be consistent with the staff element of the NHS Sustainability Model. For example, factors related to staff involvement and training were noted to be of particular importance. The engagement and involvement of staff from all levels within organizations in both the planning and

implementation of the change was strongly supported in studies reviewed. Evidence of the effectiveness of utilizing frontline staff and clinical experts as champions to model, mentor and support staff was also a key finding related to successfully sustaining a practice change in the literature reviewed. In relation to staff training, several studies concluded that the provision of effective training, the provision of tools and resources, as well as embedding practice changes in already existing structures and processes predicted success. Staff's attitude and behaviours toward a change were found to be of critical importance to success and can be positively influenced by change leaders through the provision of the rationale and motivation behind the change along with opportunities for staff to adapt, redefine and modify the changes to meet their needs. Lastly, research related to senior leadership concluded that their support and engagement was best demonstrated through the ongoing resourcing of activities related to the practice change. While it is important for leaders to consider all factors within an organization when planning and implementing a practice change, research in the area of sustainability suggests that factors related to staff carry more significance and influence over the success or failure of sustainability efforts.

2.3.5 Gaps in Existing Research

Researchers of sustainability suggest future research is needed to develop a more standardized approach to measuring the key variables that influence the long term success of a practice change. Although the sustainability research reviewed found evidence of the importance of factors related to staff, none examined the relative importance of specific factors. Future studies should also ensure the engagement and

input in the research process from key stakeholders directly in sustainability efforts to ensure their perspectives are represented and reflected.

The developers of the NHS Sustainability Model suggest that it can be used as a diagnostic tool to help identify strengths and weaknesses in an organizations implementation plan and can be used as a predictor of the likelihood of sustainability of the improvement initiative. To date, the model has had limited testing of its concepts. Research is needed on the development of a standardized approach to measuring sustainability using the model, as well as closer examination of the relative weights of specific elements of the model in different applications and settings, and significance of elements such as the staff element.

2.4 Research Questions

In an effort to address some of the current gaps within the sustainability literature and in order to contribute to the limited body of research on the NHS Sustainability Model, the focus of this thesis is to examine more closely the significance of the staff component of the NHS Sustainability Model. Through the use of in-depth interviews with key organizational leaders with direct involvement in sustainability efforts and activities, this thesis explored their unique experiences, views and perspectives in an effort to answer the following research question: To what extent do factors related to staff training and involvement, staff behaviour, and clinical leaders' and senior leaders' engagement and support impact the long term sustainability of practice changes for BPSO health care organizations who have implemented Registered Nursing Association of Ontario's (RNAO) Best Practice Guidelines?

2.5 Summary

This chapter provided an overview of theoretical models relevant to this area of study, beginning with Rogers' Diffusion of Innovations (Rogers, 2003) theory of knowledge translation. The Knowledge-to-Action process model (Graham, 2006), used by CIHR and many Canadian researchers was also briefly described. The NHS Model of Sustainability (Maher, Gustafson, & Evans, 2007) that guides this thesis research was explained in greater depth. Particular attention was paid to the staff elements within this model. This chapter reviewed both systematic reviews and selected primary research about the sustainability of practice change and guideline implementation within health care settings. Finally, the research question was presented. Methods used to answer this question are presented in the following chapter.

Chapter 3

Methods

3.1 Introduction

The purpose of this descriptive study was to explore the unique experiences, views and perspectives of organizational leaders on the the impact of the four highest ranking/weighted factors in the NHS Sustainability Model: (a) staff involvement and training; (b) staff attitudes (behaviours); (c) senior leadership engagement; and (d) clinical leadership engagement on the success and longer term sustainability of RNAO BPG implementation by RNAO Spotlight Organizations (Maher et al, 2007). A qualitative descriptive study approach was used.

3.2 Qualitative Descriptive Approach

3.2.1 Descriptive Study Design

Based on the nature of the research question proposed and existing knowledge about sustainability in BPG implementation, a qualitative research design was selected. Qualitative methods are often selected for the purpose of investigating a problem that can be best understood by exploring or describing a concept or phenomenon (Creswell, 2009). Qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem (Creswell, 2009). The process of qualitative research involves emerging questions and procedures, data typically collected in the participants' setting, data analysis inductively building from particulars to general themes, and the researcher making interpretations of the meaning of the data (Creswell, 2009).

The thesis research question was intended to explore in depth organizational

leaders' unique experiences, views and perspectives on factors related to staff, clinical leaders and senior leaders and their involvement and impact on the long term sustainability of clinical practice changes within health care organizations that have implemented Registered Nursing Association of Ontario's (RNAO) Best Practice Guidelines (BPGs). A descriptive study fits the thesis study goal of describing factors associated with experience of sustainability efforts. The "purpose of descriptive studies is to observe, describe, and document aspects of a situation as it naturally occurs" (Polit & Beck, 2004, p. 192). Descriptive research is largely characterized by emergent design, purposeful sampling, minimally structured and open-ended modes of data collection, and textual analyses (Sandelowski, 2010).

Sandelowski (2010) noted that "qualitative descriptive studies produce findings closer to the data as given, or data near" (p. 78). She refers to findings in these types of studies as "thematic surveys" composed of interpretations of data that are much less transformed than data gathered from other qualitative methods, yet still "detailed and nuanced interpretive products" (Sandelowski, 2010, p. 78). Qualitative descriptive research studies may begin with a theory of the target phenomenon or a framework for collecting or analyzing data but the approach does not require a commitment to stay with this theory or framework (Sandelowski, 2010).

This study used qualitative descriptive methods with data collected and coded from interviews using open-ended questions with eleven practice change leaders within ten RNAO BPSOs. The study examined the experience of sustaining RNAO BPGs in BPSO organizations that implemented them within their organizations. Participants' unique and varied experiences and responses to inquiry required flexibility in order to

capture the unique details of how each health care organization approached the issue of sustainability of BPGs. The descriptive study design allowed for the use of purposeful sampling of BPSO project leads, and the use of a flexible interview style to ensure a detailed, individualized and nuanced approach to data collection, analysis and interpretation.

The NHS Sustainability Model was used as a framework to guide the approach taken to data collection, analysis and interpretation. Study design, sampling strategy, planned data collection, questionnaires, analysis, and ethics are detailed in this chapter.

3.3 Sample & Sampling

3.3.1 BPSO Settings

The use of “smaller, non-random samples” is most common in qualitative studies (Polit & Beck, 2004, p. 515). Qualitative approaches typically involve sampling for the purposes of in-depth study of information rich sources to allow the qualitative researcher to gain a deeper understanding of the subject matter (Sandelowski, 1995). Sandelowski (1995) further suggests that researchers will “often have to resort to sampling they know is less than ideal for their purposes but value the deep understanding permitted by information rich cases” (p. 180). Participants selected for qualitative studies enter “primarily by virtue of having direct and personal knowledge of some event that they are able and willing to communicate to others” (Sandelowski, 1995, p. 180).

The logic of sample selection as suggested by Sandelowski (1995) was applied in this study by identifying potential data sources that would be information-rich, and could maximize the understanding of the phenomenon under study. Project and/or clinical leaders within RNAO Best Practice Spotlight Organizations (BPSOs) were identified as

participants with high potential for information richness and experience on the subject of sustaining RNAO BPGs two years or more post implementation. As described in Chapter 1, in an effort to move research into practice and engage more health care organizations and front line nurses to begin using the BPGs in their daily practice, the RNAO developed a Spotlight Organizations program. When this study was conducted there were 45 BPSOs across Ontario, in a wide variety of health care settings. Of the 45, there were 18 BPSOs at two years' post implementation of their first BPG. Identification and selection of project and clinical leads from these 18 BPSOs took place in partnership with RNAO.

Polit and Beck (2004) further suggest that although qualitative researchers “do not articulate an explicit population to whom results are intended to be generalized, they do establish the kinds of people who are eligible to participate” (p. 515). Polit and Beck (2004) suggest “selecting people who will make good informants, people who are knowledgeable, articulate, reflective and willing to talk at length with researchers” (p. 516). A prime criterion is whether a person has experienced the phenomenon that is under study (Polit & Beck, 2004). Practice change leaders for RNAO BPG implementation within a BPSOs organization acted as informants for this study. The inclusion criterion for the BPSOs was the implementation of at least one RNAO BPG at least 2 years prior to the date of the interviews. Both criteria ensured that implementation of the BPG had likely reached the stage of sustainability. In order to focus on sustainability of practice changes, the informants selected were those who took part as either project or clinical leads at the time of implementation of an RNAO BPG at least 2 years prior to the date of the interview and/or were now accountable for the sustainability

of those BPGs within their organizations. No restrictions were in place for the selection of the informants based on the type of BPGs implemented or the type of health care organization in which they worked.

3.3.2 Sampling Procedures

In this study, the purposefully selected participants were in positions within their organizations that enabled them to answer questions related to sustainability and therefore better equipped to help answer the research question being asked using a non-randomized, smaller sample size (Creswell, 2009).

The RNAO identified Spotlight Organizations who had implemented BPGs within the past 2-6 years prior to the research start date and sought their consent to release their names, contact information and email addresses to the researcher to solicit their participation in this study via an email (Appendix A). The Spotlight organizations identified by the RNAO included a variety of large and small health care organizations. Once identified by the RNAO, project leads from these Spotlight Organizations were emailed a letter of invitation from the researcher explaining the research project (Appendix B). The email with the attached letter of invitation was timed to arrive a few days to one week prior to phone contact from the researcher. Once a positive response was received from those interested in learning more about the study, potential BPSO participants were then contacted by phone by the researcher to provide more detailed information about the study in hopes of gaining their consent to participate (Appendix F). A copy of the consent form was then forwarded to them either by mail or email for their review (Appendix C). After the participant had consented to participate in the study, an interview was scheduled at their convenience. Although participants were given the

option of either a face to face interview or a telephone interview, all participants opted for a telephone interview. Workload and limited time were sighted as the reasons participants chose the telephone interview option. A verbal consent form was read aloud to the interviewee and verbal consent was acquired prior to the commencement of the interview (Appendix G).

3.3.3 Sample Size

In qualitative studies Polit and Beck (2004) suggest sample size should be based on informational need or “to generate enough in-depth data that can illuminate the patterns, categories, and dimensions of the phenomenon under study” (p. 521). Data saturation occurs when sampling to the point at which no new information is obtained and redundancy is achieved (Polit & Beck, 2004). Redundancy and, hence, sample size can be affected by the purpose of the inquiry and the quality of the informants, and the type of sampling strategy used (Polit & Beck, 2004). Sandelowski (1995) suggests different qualitative methods require different sample sizes and in order to achieve “informational redundancy and/or theoretical saturation in a study directed toward discerning the essences of experiences include six participants” (Morse, 1994, as cited in Sandelowski, 1995, p. 182). The anticipated sample size for this study was between 6 and 10 participants, to be determined depending on when saturation/redundancy of data was achieved.

Of the 45 BPSOs across Ontario, 18 BPSOs were identified as appropriate participants for this study. An invitation to participate in this study was emailed to all 18 organizations (Appendix B) who consented to be contacted by the researcher. All 18 organizations responded affirmatively via email to the researcher’s invitation to learn

more about the study. Contact was successfully made with ten organizations and dates set for follow up phone calls to provide more information about the study (Appendix F) and gain consent. Initially, ten organizations committed and consented to participation in the study and telephone interviews were scheduled for the first six. There were eleven participants from ten different organizations who participated in one-hour interviews for this study.

Testing for data saturation continued throughout the data collection process with interviews coded and analyzed in small batches (Polit & Beck, 2004). Although a smaller sample size of six was obtained to begin, the remaining four organizations were scheduled for interviews after early data analysis and early emergent findings to ensure the achievement of “informational redundancy to ensure that no new information emerges” (Polit & Beck, 2004, p. 522). In total, 10 interviews were completed with 11 participants for this study.

3.4 Data Collection

3.4.1 NHS Sustainability Model Self-Assessment Tool

In order to enhance understanding of each participant’s self-perceptions and views on the sustainability efforts within their organization, each participant was asked in advance of the interview to complete the NHS Sustainability Model self-assessment tool developed by Maher et al. (2007). Appendix H is a copy of the brief and easy to use tool designed to be completed by either individuals or teams involved in improvement initiatives. For individuals, it is suggested that “they may wish to undertake a sustainability assessment based on their individual thoughts” related to sustainability efforts (Maher et al., 2007, p. 8). Maher et al. (2007) suggest that the act of completing

the self-assessment tool not only provides an individual's perspective on sustainability efforts, but can also be useful in preparing individuals for discussions about improvement initiatives and the efforts to sustain them. The completed self-assessment tool was reviewed prior to interviewing each participant so the researcher was aware in advance of the participants' perception of their organization's sustainability efforts.

3.4.2 The Interview

The first objective of the interview was to acquire information on the participant's individual experiences and insights on sustainability efforts within their health care organization post implementation of the BPGs. The interview was focused on the four factors within the staff element of the NHS Sustainability Model: (a) staff involvement and training; (b) staff attitudes (behaviours); (c) senior leadership engagement; and (d) clinical leadership engagement. The second objective of the interview was to identify participant's views on how these four factors influenced (contributed to or hindered) success and sustainability of practice changes within their health care organization.

The researcher used office space and phones in the Department of Nursing at Brock University to conduct all interviews so that call display showed a respected source of contact and privacy was assured. Prior to the commencement of the interview, a standard script was read to each participant restating the purpose of the study and the semi-structured nature of the interview (Appendix D). Participants were also reminded of the approximate length of the interview, their right to withdraw from either the interview or study at any time, and the assurance that all information shared would remain confidential and all personal indicators removed from the data (Appendix D). The interview was scheduled for 45-60 minutes in length with an option for participants

to break the interview up into two shorter sessions to accommodate their schedules if needed. Each of the interviews completed were done within the 60 minute scheduled time frame and none of the participants opted to divide the interviews. The interview was digitally recorded and field notes in the form of memos were taken throughout the interview. Current and retrospective data were gathered throughout the interviews.

An interview guide was developed for this study guided by the theoretical model (Appendix E). Specific questions used in the interview were similar in nature to those found within the staff component section of the NHS self-assessment tool (Appendix H). The line of questioning within the semi-structured interview moved from general to more specific questions. Questions began with characteristics of the participant and their organization, moving to those related to their experience with BPG implementation, their role in sustainability efforts, as well as their perceptions and views on the success of those sustainability efforts. Next, the questions became more focused on factors related to the specific staff elements of the model with the flexibility near the end of the interview to probe deeper into areas of significance, of interest or to seek more information or clarity in an area covered earlier in the interview as needed (Appendix E).

A semi-structured interview format was used with each participant with pre-designed questions to help guide the interview with the major focus of the questions related to the interviewee's perceptions. Creswell (2009) suggests that the use of an interview guide allows the researcher some control over the line of questioning to ensure that they will obtain the necessary information required with each interview while still allowing participants to share their experiences and insights. The semi-structured interview provided sufficient structure "aimed at capturing precise data of a codable

nature so as to explain behaviour within pre-established categories” such as those outlined in the four staff elements within the NHS Sustainability Model (Fontana & Frey, 2005, p. 706). The relaxed and less structured aspects of this approach also enabled the researcher to explore and begin to understand the complex behaviour of those involved in efforts to sustain BPG implementation “without imposing any priori categorization that may limit the field of inquiry” that might occur if a more structured format for the interview was used (Fontana & Frey, 2005, p. 706).

Field-testing of the interview guide was done prior to interviewing selected participants. The thesis supervisor and two other committee members reviewed the interview guide developed and provide feedback on content. Practice Change Leads for RNAO BPGs from researcher’s own health care organization were interviewed for pre-testing of the interview guide and their feedback and input used to alter the guide. The researcher also scheduled meetings with thesis supervisor following the first few interviews to debrief on the interviews and determine if any modifications were needed to the interview guide. For example, after the completion of the first interview it was apparent that for some of the more specific questions, participants would need to be asked in advance to consider their answers in relation to one specific BPG. This allowed them to provide more specific examples about their experiences and perceptions.

3.4.3 Data Collection Procedures

All interviews were recorded using a digital audio recorder. Unique identifying (ID) numbers were assigned to each participant interviewed. These identifiers were then used to label and securely store all audio, electronic or paper records. Verbatim transcription of the recordings were completed and several reviews of the transcripts by

the researcher completed to identify any deliberate alterations of the data or intentional “fixes of the data, accidental alterations of the data or inadvertent transcription errors and unavoidable alterations of the data or the missed nonverbal cues and intonations” (Polit & Beck, 2004, p. 547). Transcription conventions were established by the researcher in advance. The establishment of these guidelines for handling potential problems during transcription was important to help ensure the credibility of the data (Polit & Beck, 2004).

In addition to the recording and transcription of the interview, the researcher engaged in memoing throughout the data collection process. Defined as “the theorizing write-up of ideas about codes and their relationships as they strike the analyst while coding” (Glaser, 1978, as cited in Miles & Huberman, 1994, p. 72). Memos are conceptual in nature and intended to “tie together different pieces of data into a recognizable cluster, often to show that those data are instances of a general concept” and “are one of the most useful and powerful sense-making tools at hand” (Miles & Huberman, 1994, p. 72).

Memos were used in this study to make note of unexpected findings, to highlight interesting or reflective remarks, to make note of general or recurring themes and to catalogue possible new codes not already identified or predetermined for use in data analyses. Memos were taken during the interview to capture general observations and impressions, as well as challenges. Following the interview, a guide to memoing post interview was used to ensure a systematic approach was taken to capture the researcher’s general impressions and reflections at the end of each interview (see Appendix I).

3.5 Data Analysis

“The process of data analysis involves making sense out of text and image data. It involves preparing the data for analysis, conducting different analyses, moving deeper and deeper into understanding the data, representing the data, and making an interpretation of the larger meaning of the data” (Creswell, 2009, p. 183). A step by step process for the analysis of the data occurred in this study. Creswell’s (2009) suggested the use of a data analysis plan to guide and frame the process followed by the researcher (see Figure 3.1). Both deductive and inductive content analyses were used on the data in this study. The process of deductive analysis “begins with theoretically based hypotheses and confirms or falsifies them by reference to some body of research” or earlier theory (Lincoln & Guba, 1985, p. 333). The NHS model provided the theoretically based hypotheses (the elements of the theory and their relative importance) and the data were analyzed and refined from general to more specific findings as they relate to this model. However, inductive analysis of data was also completed.

Figure 3.1 Summary of Data Analysis Plan (Creswell, 2009, p. 185)

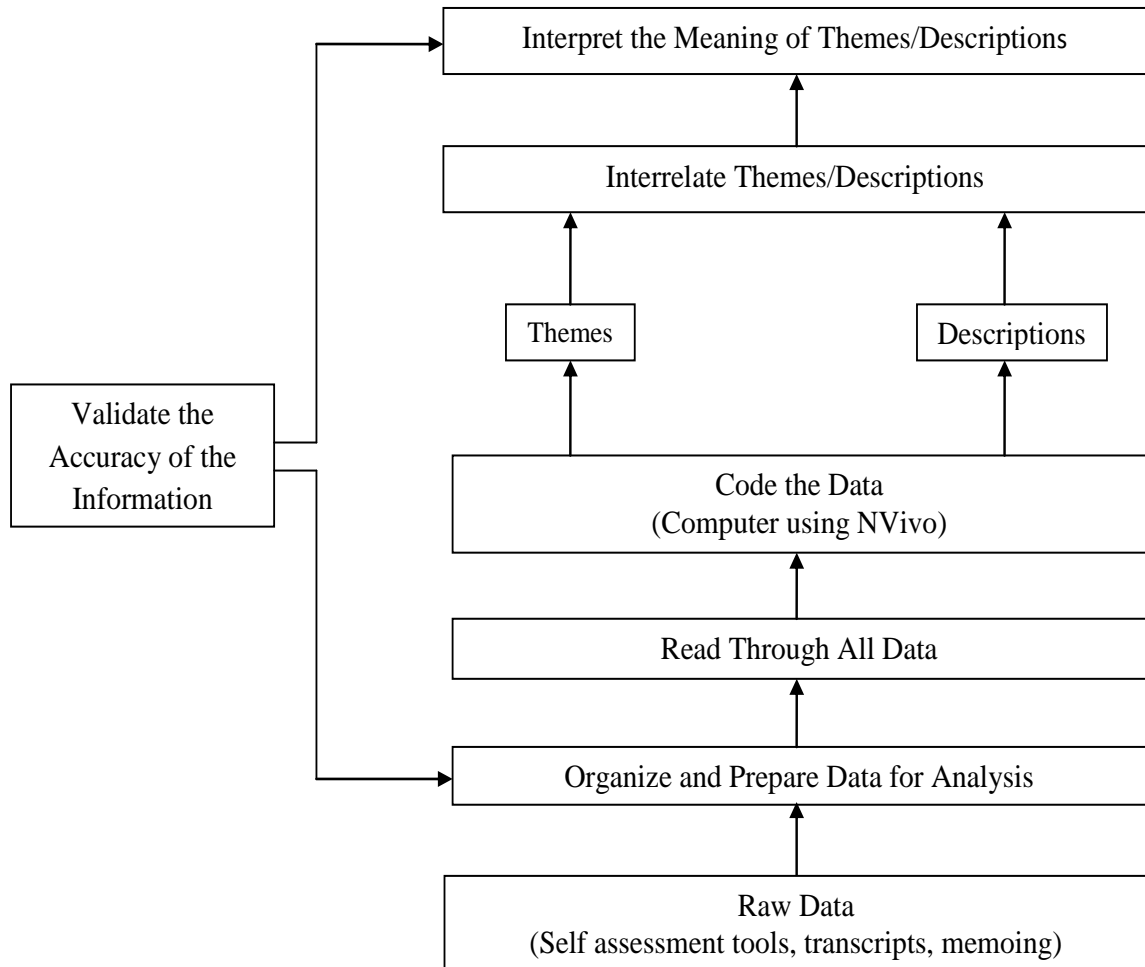


Figure 3.1. Creswell suggests the use of a linear, hierarchical, step by step approach to qualitative data analysis. The use of a systematic approach moving from the specific to the general with multiple levels of analysis as depicted in this figure.

3.5.1 Organize and Prepare Data for Analysis

Data analysis involved “continual reflection about the data” and occurred concurrently as data were collected, reviewed and interpreted (Creswell, 2009, p. 184). The first step involved organizing the raw data for further analysis. The raw data for analysis was gathered from three main sources: the self-assessment tool, memoing, and interview transcripts. The researcher organized all raw data gathered from all sources into word documents or excel spreadsheets that were then carefully stored in secured electronic folders.

3.5.2 Read Through Data

Once all three sources of raw data were gathered and stored for each organization, the researcher carefully read and re-read the data to validate for accuracy in the following order: the self-assessment tool, the interview transcription, then memos. Each audio recording of the interviews was reviewed. They were listened to and compared for accuracy to the transcripts. Revisions were made to the transcripts when discrepancies were identified. Interviews were re-read a second time looking for underlying meaning in the information shared and other thoughts, concerns or general impressions that were then noted in the margins of the transcripts. This stage of analysis allowed the researcher to gain a better sense of each participant’s thoughts and ideas, the overall tone and impressions of interviews, as well as early impressions on the depth, the credibility, and the usefulness of the information (Creswell, 2009).

3.5.3 Code the Data

A more detailed analysis and coding of the information then followed. “Coding is the process of organizing the material into chunks or segments of text before bringing meaning to information” (Rossman & Rallis, 1998, as cited in Creswell, 2009, p. 186).

Codes are key words, phrases or statements that relate to the same central meaning (Graneheim & Lundman, 2004). Table 3.1 summarizes the planned eight step coding process that was used at this stage of data analysis.

Table 3.1

Systematic Approach to Analyzing Textual Data (Tesch, 1990, as cited in Creswell, 2009, p. 186)

Systematic Approach to Analyzing Textual Data (Tesch, 1990 as cited in Creswell, 2009, p. 186).	
Step 1	Read all transcripts, self assessment tools and memos carefully to get a sense of the whole and jotting down ideas as they come to mind.
Step 2	Select one participant's data at a time going through each one very carefully to get a sense of what it is really about, the underlying meaning in the information shared. Write thoughts, ideas, impressions, concerns in the margins while reading the data collected.
Step 3	After reviewing several participants, make a list of topics and begin to cluster similar topics together. Form these topics into groupings titled as major topics, unique topics and other.
Step 4	Using the list of topics, reviewing the data again and begin to abbreviate the topics into the predetermined codes or emerging codes. Begin writing the abbreviated codes next to the appropriate segments of the text for the first few participants to see if new categories or codes emerge from this preliminary organizing scheme.
Step 5	Find the most descriptive wording for the topics and turn them into categories by grouping topics that relate to each other. Draw lines between categories to show interrelationships where they appear at this step.
Step 6	Make a final decision on the abbreviations for each category and organize these categories to align with elements within the theoretical model being used.
Step 7	Assemble the data material belonging to each category in one place and perform a preliminary analysis.
Step 8	If necessary, recode existing data.

Pre-determined codes were created prior to data collection based on 1. The theoretical model guiding this study; and 2. Key findings from the literature review regarding significant factors that play an important role in sustaining practice change within an organization. These codes were organized based on the staff element of the NHS Sustainability Model (2010): (a) staff training and involvement; (b) staff behaviours; (c) senior leaders; and (d) clinical leaders. Appendix J provides the details and definitions of the 16 predetermined staff element codes used throughout the initial coding process.

3.5.4 Manual Coding

Manual coding of the interview transcripts was completed using the list of predetermined codes. Coloured highlighters and post-it notes were used for the manual coding process. Using a list of abbreviations of each of the predetermined codes, the researcher colour coded key text within each transcript and assigned an abbreviated code next to the appropriate segments of the text. In addition to the assignment of an abbreviated code, these lines of coded text were also assigned either a plus or minus sign as a symbol of either a positive or negative example of sustainability or activity related to sustainability. The first six interview transcripts were coded using the predetermined codes.

3.5.5 Emerging Coding

Creswell (2009) suggests that the predetermined codebooks will evolve and change throughout the study based on closer analysis of the data. This was indeed found to be true in this study. After the completion of manual coding for the first six interviews it was apparent that additional factors and common themes were emerging and being identified in the data with no predetermined codes to reflect them. For example, during

coding it was becoming necessary to distinguish between the types of senior leadership support reported (e.g. verbally promoting verses financially supporting the change). Therefore new codes were developed and added that provided more detailed examples and possible sub-categories of the elements of the NHS model. Thus, the list expanded to include these emerging factors (see Appendix K)

It became apparent that some of the predetermined codes were too broad in scope and would need to be refined and made more specific (e.g. ,staff training – instructor training and self-directed training) (see Appendix K). Therefore, additional codes were added to allow for more specific coding. These additions resulted in an increase from 16 codes to 25 related to the staff element of the model. The remaining four interview transcripts were then manually coded using the expanded list of codes. The first six interviews were then re-coded using the expanded list.

3.5.6 Analyzing the Data: Inter-relate Themes/Descriptions

Once the review of the raw data and the manual coding was completed using the expanded list of codes, a spreadsheet was created to begin further analysis of the data. The spreadsheet was used to begin organizing the large volume of findings from all three sources of raw data for each of the ten organizations. The spreadsheet was designed to provide a quick summary of the organizations themselves and their sustainability activities which included: 1. Type of organization (hospital, community or public health); 2. Name of BPGs implemented; 3. Type of guideline (clinical verses workplace); 4. Successful sustaining changes (yes or no); 5. Summary of staff element of self-assessment tool.

The remainder of the spreadsheet was formatted using the finalized list of established code to create the rows. The columns were then labelled with either a plus or minus sign to further delineate the data into either a positive or negative example of that particular sustainability activity being coded. If an activity was present or seen to be having a positive effect on the sustainability of a practice change it was viewed as a positive example and placed in the column marked with a plus sign. Conversely, if an activity was not happening or if it was seen as having a negative impact on sustainability it was marked as a negative example and placed in the column marked by a minus sign.

Each electronic version of the interview transcripts, formatted using numbered lines and colour coded text, was then reviewed and excerpts of the interview cut and pasted into the appropriate cells. The format of the spreadsheet facilitated the sorting of a large volume of data gathered into the 25 codes related to the staff elements of the theoretical model. Next, the data were further sorted by organization into two categories: a) sustained, and b) not sustained. This mechanism allowed for further sorting of the data based on organizations that appeared to have successfully sustained practice changes verses and those that had not.

3.5.7 Establishing Interrelated Themes

“Content analysis is a research method for making replicable and valid inferences from data to their context, with the purpose of providing knowledge, new insights, a representation of facts and a practical guide to action” (Elo & Kyngas, 2007, p. 108). The content analysis for this study was intended to “generate a description of the setting or people as well as categories or themes for analysis” (Creswell, 2009, p.189). Once all the data was coded, sorted and organized to align with the staff elements within the

theoretical model and in relation to sustained practice changes, themes began to emerge in the data. Common themes were then grouped based on their interrelationships (e.g. staff involvement – working groups) and the data then further sorted into broader categories.

The researcher followed a “ladder of abstraction” moving from the text and codes to categories and then moving to identify themes and trends, and to testing hunches and findings (Carney, 1990, as cited in Miles & Huberman, 1994, p. 92). The aim was to “first delineate the deep structure and then to integrate the data into an explanatory framework” which, in this case, is NHS Sustainability Model’s staff element (Carney, 1990, as cited in Miles & Huberman, 1994, p. 91). The process involved “describing and explaining; the researcher typically moves through a series of analysis episodes that condense more and more data into a more and more coherent understanding of what, how and why” (Miles & Huberman, 1994, p. 91).

3.5.8 Interpreting the Themes and Categories in Relation to Theoretical Model

The final step in data analysis is interpreting and finding meaning in the data (Creswell, 2009). Meaning was found through comparisons of the study findings with the knowledge to date on sustainability revealed in the literature search, as well as, to the NHS model. The findings were shown to either “confirm or diverge” from what is known or theorized or suggested “new questions that need to be asked” in the study of sustainability (Creswell, 2009, p. 189).

3.6 Research Ethics

An application was submitted to the Brock University Research Board of Ethics for clearance to proceed with the study. Ethical guidelines regarding respect for human

dignity, informed consent, vulnerable persons, privacy and confidentiality, justice and inclusiveness, balancing harms and benefits, minimizing harm and maximizing benefits are specified in The Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada, Tri-Council Policy Statement: Ethical Conduct for Research Involving (Canadian Institute of Health Research, Natural Sciences and Engineering Research Council of Canada, Social Sciences and Humanities Research Council of Canada, 1998). These guidelines were followed in the study.

Letters of invitation with contact information of the researcher and supervisor, as well as scripts to explain the study to participants were developed. For the telephone interview, the researcher explained the research and was available to answer any questions prior to the subjects participating in the interview. The data gathered was confidential, and the names of participants or institutions for which they work are not identified in the report of the study. Consent to participate in the study was obtained verbally when the interview was arranged and once again before the phone interviews were conducted.

The researcher works as a Client Service Manager at the Hamilton, Niagara, Haldimand, Brant and Burlington (HNHB) Community Care Access Centre (CCAC). The HNHB CCAC is an RNAO BPSO and the principal researcher was a Practice Change Leader for the implementation of two RNAO BPGs. This employment enhances comprehension of the issues, challenges, and context of sustainability of practice change within a health care organization. Participants in the study were not selected from HNHB CCAC but rather from BPSOs where the researcher has no supervisory relationships with

any of the study participants.

There may have been unintended consequences of the study, which may not have been predicted. However, there was no anticipated harm because of this research. The researcher believes that a positive benefit of the involvement in the research study may be enhanced awareness and dissemination of the NHS Sustainability Model among the health professionals interviewed within the selected BPSOs with possible effects on knowledge translation.

3.7 Procedures to Enhance Credibility and Trustworthiness of Findings

“Good qualitative work is both descriptively sound and explicit, and interpretively rich and innovative” (Polit & Beck, 2004, p. 584). Lincoln and Guba (1985) suggested four criteria for developing the trustworthiness of qualitative inquiry: (a) credibility; (b) dependability; (c) confirmability; (d) transferability (Lincoln & Guba, 1985). Efforts to apply all four criteria were made throughout this research study. Table 3.2 is a summary of the efforts that were applied in this study to enhance the credibility and trustworthiness of the findings.

Table 3.2

Quality Enhancement Strategies (Lincoln and Guba, 1985)

Quality Enhancement Strategies (Lincoln and Guba, 1985)				
STRATEGY	Credibility	Dependability	Confirmability	Transferability
Throughout the Inquiry				
Reflexive journaling	X			
Careful Documentation		X	X	
Data Generation				
Prolonged Engagement	X			
Theoretically driven sampling	X			
Audiotaping & verbatim transcription	X			
Triangulation (data, method)	X	X		
Saturation of data	X			X
Persistent observation	X			
Audit Trail	X			

STRATEGY	Credibility	Dependability	Confirmability	Transferability
Data Coding and Analysis				
Transcription rigor	X			
Inter-coder checks; development of a codebook				X
Triangulation(investigator, theory, analysis)	X		X	
Peer review/debriefing	X		X	
Presentation of Findings				
Documentation of quality enhancement efforts	X			X
Thick, vivid descriptions	X			X
Disclosure of researcher credentials, background	X			
Documentation of reflexivity	X			

Credibility refers to confidence in the truth of the data and interpretations and involves carrying out the study in a way that enhances the believability of the findings and taking steps to demonstrate credibility in research reports (Lincoln and Guba, 1985). In this study, strategies to enhance credibility included reflexive journaling, as well as regularly scheduled meetings with thesis supervisor for input and guidance, particularly during the data coding and analysis phases. Credibility during data generation was established through prolonged engagement or “the investment of sufficient time collecting data to have an in-depth understanding of the people under study, to test for misinformation, and distortions” as well as through use of persistent observation referring to “the researchers’ focus on the characteristics or aspects of a situation or a conversation that are relevant to the phenomena being studied” (Polit & Beck, 2004, p. 589). Comprehensive memoing, audiotaping and verbatim transcription of the interviews further contributed to the credibility of the information gathered (Polit & Beck, 2004). Credibility was further enhanced through the use of thick and contextual descriptions in the findings chapter “with the judicious inclusion of verbatim quotes from study participants” (Polit & Beck, 2004, p. 595). And finally, an audit trail, or “a systematic collection of materials and documentation that would allow an independent auditor to come to the same conclusions about the data” was completed and consisted of the field testing of the interview guide, digitally recorded interviews, self- assessment tools reviewed prior to each interview, use of the interview guide for each interview, verbatim transcription of the recordings, detailed memoing throughout the interview and data analysis process, as well as rigorous coding using an established codebook (Polit & Beck, 2004, p. 591).

Dependability refers to the stability (reliability) of data over time and conditions or, in other words, “would the findings of an inquiry be repeated if it were replicated with the same (or similar) participants in the same (or similar) context?” (Polit & Beck, 2004, p. 585). “Confirmability refers to objectivity, that is, potential for congruence between two or more independent people about the data’s accuracy, relevance or meaning” (Polit & Beck, 2004, p. 585). It is important to establish that the data provided was a true representation of the information provided by participants and that the interpretation of the data was not invented by the inquirer (Polit & Beck, 2004). Findings must reflect the participant’s voice and “not the researchers’ biases, motivations or perspectives” (Polit & Beck, 2004, p. 585). This was achieved, as recommended by Polit and Beck, through frequent cross referencing of memos, audiotape and verbatim transcription and results of the self-assessment tool by researcher to ensure accuracy, as well as frequent reviews of the data by the thesis supervisor to ensure the findings reflect a true representation of the information shared by participants and remains unbiased or influenced by researcher’s perspective.

The extent to which findings can be transferred to or have the applicability in other settings or groups is defined as transferability (Polit & Beck, 2004). Investigators have a responsibility to provide sufficient descriptive data to allow consumers to evaluate the applicability of the data to other contexts (Polit & Beck, 2004). The sample and setting are described for the reader.

Many strategies that can be applied in qualitative research that simultaneously address these remaining four criteria. A search for external evidence from other studies or from other sources during coding and analysis phase was conducted, as well as, a

“systematic exploration of rival themes and explanations during analysis: Failure to find strong supporting evidence for alternative ways of presenting the data or contrary explanations helps increase confidence in the original, principal explanation generated by the analyst” (Patton, 1985, as cited in Polit & Beck, 2004, p. 594).

3.8 Research Reflexivity

“The mandate for researchers embarking on any qualitative study is to make explicit for themselves and others where they were when they began their studies and to be ready and willing to move away from there if their further investigation warrants it” (Sandelowski, 2010, p. 80). The researcher in this study has held a management position within a community health care organization and was a practice change leader involved in the implementation of several RNAO Best Practice Guidelines (BPGs) within the organization. From that experience, the researcher has had firsthand experience with the challenges and rewards that come with efforts to move evidence into practice. The qualitative approach taken in this study provided an opportunity for the researcher to explore the experiences of other health care professional who shared similar responsibilities as practice change leaders for BPG implementation and sustainability efforts. The researcher’s personal involvement with RNAO BPG implementation and sustainability activities was the perspective of the researcher at the outset of the study.

Although the four staff elements of the NHS Model of Sustainability formulate the preliminary categories for data analysis, consistent with Sandelowski’s (2010) recommendations, there was no firm commitment to this framework or to these categories if after analyzing the data they were no longer applicable.

3.9 Summary

This chapter has described the research methods used for this thesis research. Subsequent chapters report and discuss the findings.

Chapter 4

Findings

4.1 Introduction

This chapter will provide a summary of the characteristics of the participants who took part in this study followed by the findings of the data analyses. Findings will be presented in three sections. The first section will present findings in relation to the key staff elements within the NHS Model which include: (a) staff involvement and training; (b) staff attitudes (behaviours); (c) senior leadership engagement; and (d) clinical leadership engagement. For the purposes of this study, as was the case in both data collection and data analysis, the findings related to staff involvement and staff training will be presented and discussed separately. The second section will present findings as a comparison of organizations found to have successfully sustained practice change to those who were found to have been unsuccessful in their efforts. In the third section, an overview of the major study findings will be presented.

Table 4.1

Summary of the Characteristics of the Study Sample

Summary of the Characteristics of the Study Sample			
	Total	Sustained	Not Sustained
Number of Organizations	10	6	4
Number of Participants	11	7	4
Type of Organization			
Hospital	6	4	2
Community	4	2	2
Length of Time as RNAO BPSO			
Up to 2 years	3	2	1
3-4 years	5	2	3
4-6 years	2	2	0
Participants Involvement in Initial BPG Implementation			
Yes	8	7	1
No	3	0	3
Participants Involvement in Sustainability Activities			
Yes	10	7	3
No	1	0	1

4.1.1 Types of Organizations

There were ten organizations interviewed for this study. Each had one interviewee with the exception of one that had two interviewees. There were six hospitals and four community organizations represented. All organizations were situated in Ontario, Canada with the majority of them located in southern Ontario and two were located in northern Ontario. The hospitals ranged from large, urban teaching centers and tertiary care facilities to smaller community hospitals situated in smaller cities and rural communities. The four community organizations varied in nature from those providing in home health care services, to those offering outpatient rehab and health teaching in their communities. Organizations participating in this study ranged in size from national and provincial

organizations with multiple branches across the country and province employing hundreds of staff and managers to a smaller community based hospital with less than 100 staff. Two organizations had just achieved their RNAO BPSO designations at the time of the interview so had only been involved with BPG implementation for about two years. Five organizations had achieved their designation and been involved with BPG implementation for three to four years and the remaining two organizations had four to six years of experience. All ten were engaged in ongoing BPG implementation activities in an effort to maintain their RNAO BPSO designation.

4.1.2 Type of RNAO Guidelines Implemented

The total number of BPGs reported to have been implemented by all ten organizations combined was 33. All ten organizations had successfully implemented on average three RNAO BPGs as part of their BPSO designation with a range from two to six per organization at the time of the interview. All had chosen to implement at least one clinical guideline (e.g. falls prevention, pressure ulcer prevention) with five organizations electing to also implement at least one relational guideline (e.g. client centered care).

4.1.3 Description of Participants' Role in Organization

All participants in the study were health professionals who were actively involved in either implementing and/or sustaining RNAO best practice guidelines within their organization. Of the eleven participants interviewed, four were in senior leadership or management positions while seven were in non-management positions. Of those in management positions, two were at a director level and two were clinical practice managers. The managers had involvement and accountability for the BPG initiatives within their organizations with professional practice leads, coordinators or educators assigned to the

BPG projects who were responsible for the actual implementation of the BPGs within their organization. The seven participants in non-management positions were fulfilling these various roles as professional practice leads, coordinators or educators within their organization at the time of implementation. None of the seven participants fulfilling non-management positions worked directly with units or departments responsible for the delivery of direct patient care. Rather, they were all attached to support departments responsible for staff education and/or professional practice development.

4.1.4 Level of Participants' Involvement with Initial Implementation and Sustainability Activities

Seven of the eleven participants were involved in the original implementation of RNAO BPGs within their organization and four were not. All four management participants and three of the non-management group were involved during the original implementation. Of those involved with the original implementation, all remained actively involved in ongoing implementation of new BPGs and with sustainability work. Of the four non-management participants who were not present during implementation, three were knowledgeable about their organizations' designation as an RNAO BPSO, informed about the details of what had taken place during the implementation phase and were actively engaged in sustainability activities. However, one identified as new to their role and reported no involvement in the original implementation of the BPGs. This participant reported little knowledge of the implementation and sustainability activities within their organization.

4.2 Findings in Comparison to NHS Model

The findings of this study were largely consistent with the NHS model but tended to provide for a more detailed, elaborated understanding of some of the staff elements within the model. There were some elements that may not have been present in the participants' settings and there were some noted differences in how these elements were evident when organizations were compared on the basis of how successful they were at sustaining the BPG implementation. Within the NHS model, staff involvement and training, staff behaviour, senior leadership and clinical leadership are the four key staff elements identified. However, for the purposes of organizing the findings and results of this thesis, the first staff element will be divided into two parts and discussed separately as staff training and staff involvement. The findings have been organized using these five staff elements. For each of the five staff elements findings are presented as follows:

1. Findings consistent with the NHS model and evident in the data;
2. Findings consistent with the NHS model but specified or elaborated upon more in the data ; and
3. Where applicable, elements of the model not evident in the study data. Table 4.2 provides a summary of the key findings in comparison to the theoretical model used in this study. Details are described in subsequent sections of this chapter.

Table 4.2

Summary of Key Findings Related to Staff Elements of NHS Model

Elements of NHS Model	Themes Consistent with NHS Model and Evident in Data	Themes Consistent with NHS Model But Specified/Elaborated More in Data	Elements of the NHS Model Not Evident in the Data
Staff Involvement			
staff play a part in innovation, design and implementation of the change	early involvement/support of key stakeholders - staff and management	working groups established and involved at early stage	
staff ideas used to inform the change process from the beginning	staff involved in development of recommendations for change	working groups sustained - formally or informally	
staff trained and empowered to run small-scale tests(PDSA) based on their ideas, to see if additional improvement should be recommended	ongoing formal and/or informal feedback from staff used to inform change process	multidisciplinary teams with subject matter experts identified	
	pilot/PDSA - opportunity to trial new processes/tools before implementation	champions involved in education, training, development of staff	
		champions retained to support after initial implementation	
	results/outcomes shared with key stakeholders - staff and management	ongoing support and/or participation of key stakeholders – staff and management	
		results/outcomes shared with key stakeholders - staff and management	

Elements of NHS Model	Themes Consistent with NHS Model and Evident in Data	Themes Consistent with NHS Model But Specified/Elaborated More in Data	Elements of the NHS Model Not Evident in the Data
Staff Training			
staff are educated and trained to take the change forward	formal staff training delivered at implementation	peer to peer training - on the job, preceptor	
established training and development infrastructure to identify gaps in skills and knowledge	ongoing staff education and training	self-directed learning - on-line module	
	provision of instructional tools/resources	practice changes embedded in process	
		inclusion of training in new staff orientation/corporate training	
		ongoing access to instructional tools/resources	
Staff Behaviours			
encouraged and able to express their ideas regularly throughout the change process	opportunity to adapt, refine and or modify the innovation	staff provided with rationale and motivation for the need for change	
staff input taken on board		management engaged and/or supportive	staff encouraged to share ideas
staff think that the change is a better way of doing that they want to preserve for the future	staff open and/or receptive to change	engagement and support of peer opinion leaders with credibility	

Elements of NHS Model	Themes Consistent with NHS Model and Evident in Data	Themes Consistent with NHS Model But Specified/Elaborated More in Data	Elements of the NHS Model Not Evident in the Data
Senior Leaders			
involved in the initiative, understand it and do they promote it	visible support - involved/promotes change	BPG Steering or Practice Committee exists	trusted, influential, respected and believable
		ongoing human and /or fiscal resources to support practice change	respected by their peers and can influence others to get on board
		BPG Management or Education Lead Identified	take personal responsibility to help break down barriers and give time to help ensure the change is successful
Clinical Leaders			
involved in the initiative, understand it and promote it	early involvement - understand and promote the change		
trusted, influential, respected and believable	clinical experts/SME - seen and used as clinical resource		
take personal responsibility to help break down barriers and give time to help ensure the change is successful	respected by staff - trusted/influential		
	visible to staff - personal/professional responsibility to promote change		

4.2.1 Staff Involvement

With respect to **staff involvement in sustaining practice change**, the NHS model stresses the importance of three key sub-elements: 1. Staff participation in the innovation's design and implementation, 2. Staffs' ideas used to inform the change process from the beginning, as well as, 3. Staff being given the opportunity to run small scale tests of an change to allow for further recommendations or improvements (Maher et al., 2007).

In terms of the first sub element of staff involvement, findings in this study were consistent with identifying the importance of ensuring staff are given the opportunity to be involved in the design and implementation of the practice change. The NHS model refers to involvement of frontline staff as helping in identifying skills, developing the training programs, as well as, assisting in the education and training of staff through the use of a train-the-trainer model (NHS Modernization Agency Improvement leader's guide to sustainability and spread, 2002).

All eleven participants agreed with the importance of involving staff in the BPG design implementation process and further elaborated on more specific mechanisms they had found helpful in facilitating staff involvement that extends beyond the detail provided in the NHS model. These specific mechanisms described fell into three categories: 1. Use of working groups or teams established early and sustained post implementation, 2. Multidisciplinary working group members with subject matter expertise, and 3. Point of care developed as champions and involved in education, training and implementation and retained to support the change post implementation. Actions and strategies in these three categories are described in turn.

First, the establishment of working groups at an early stage in the BPG implementation process was a specific mechanism used to involve staff by six of the ten organizations involved in this study. Those who committed to the establishment of working groups to support their BPG implementation reported greater staff engagement and less resistance from staff to the change as reflected in the comment below from one senior leader about the overall success of one BPG implementation.

We had some frontline staff on the working group, obviously not representatives of every unit, but we had some frontline staff on the working group. Like I mentioned, picking appropriate guidelines and not just kinda picking them because they need to do two more this year or something like that. They really evaluated what they thought staff needed and we allowed them to have that input. So for making a final decision you need them to be excited about what they're doing as well. I think that was the key to our success as well as it was an organization mandate obviously but having them be part of the selection process. We worked hard to select a strong working group and in establishing staff buy in... and really being clear about expectations. They laid out how the work could be done without adding a ton of extra time; simplified the information and applied the information without taking up too much of the staffs' time for what needs to be done. The working group was really trying to make it an easy process (Organization #9).

One of the four organizations who reportedly did not use working groups effectively during their BPG implementation recognized the value in this type of frontline engagement.

Not having that representation from the front line because it is such a challenge, I think sometimes it's considered at the end like we'll make all of the decisions and then we'll run it by the nurses instead of having the nurses in on the decision making process because of the inherent difficulties of that (Organization #4).

In the organizations where working groups were used, they varied in size from one or two employees to over 20. Membership on working groups included a wide range of staff from senior directors, to professional practice leads and educators to frontline staff nurses and other allied health professionals. They varied in structure from formal

committees with clearly established accountabilities, project deliverables and timelines to very informal, unstructured groups with little to no formal accountabilities. One participant described their more formal working groups approach to BPG implementation.

So each of the BPGs... each of the BPG working groups had... I had assigned a specific lead and it was a clinical nurse specialist with... who had the most kinda expertise... content expertise for that area. So their kinda scope was in terms of facilitating meetings, minutes, agendas, kinda stakeholder engagement, making sure that we all did... I had them all do project charters and then project plans in terms of making sure that we're on track and moving forward, connecting with me when there were, as they say, hiccups or challenges (Organization #2).

An example of the less formal and structured working groups were described by one participant as:

... a small team pulled together. Our working group consisted of key reps from the units. The manager, educator or professional practice BPG lead. The first step was essentially pulling that working group together and then looking at using the RNAO toolkit and obviously the best practice guideline and doing a bit of a gap analysis and looking at... okay so these are the recommendations for best practice, where are we at with our practice. It's the working group that then determines kinda which recommendations to focus on in terms of what's in the best practice guideline (Organization #1).

Working groups were sustained formally or informally after the initial implementation by four of the ten organizations interviewed and were noted to be an important factor in the ongoing success of the BPG within their organizations. One participant saw these working groups as an opportunity to continually improve and adjust the BPG to meet the needs of the staff on an ongoing basis.

The majority of the tools were developed, again, from the working group so some staff input there and the working group would disseminate the tools and there would, to be honest, there were some tools that we revised after we first rolled them out because we had not had enough frontline engagement and it was clear that it wasn't meeting the need from a clinical perspective and so we'd pull the working group back together ... we didn't have to redesign the whole tool but

tweak it so that it was more user friendly or clinically applicable (Organization #11).

All eleven participants agreed in the importance working groups could play in the support of BPG sustainability through greater staff engagement and staff buy-in.

The importance of engaging a multidisciplinary team with a variety of subject matter expertise early and throughout the change process was also specifically identified by participants as a mechanism to involve staff more and to ensure the practice change is meeting the needs of all disciplines involved. Although only four of the ten organizations reported to have established multidisciplinary teams to work on their BPG implementation, the four participants using this approach believed it had a large impact on all staff's attitudes toward the BPGs, especially those involving a change in practice that was more generic and less professional discipline specific in nature (e.g. falls prevention). The configuration of the multidisciplinary teams varied between the four sites from including other allied health professional staff from an entire hospital unit (e.g. nurses, occupational therapist, physiotherapist, physician, social worker) to fewer staff but with support that extended beyond the nurses.

One hospital leader reflected the need for broad stakeholder engagement, recognizing that the RNAO BPGs “are written through a nursing lens but we’ve found that the more diverse and inter-professional our working groups were the better in terms of being able to adopt and implement at the unit level” (Organization #2). The participant went on to describe the organization’s use of a multidisciplinary team approach.

So one of the initial steps was pulling together a working group and the working group was... is inter-professional and it’s basically the content expert. So it’s clinical nurse specialist from mostly the medical and the surgical areas, as well as

the allied health content expert. So we've got a physio, we've got a dietician, we've got an OT and we have frontline nurse representation also on that working group (Organization #2).

Although the use of a multidisciplinary approach was used by less than half of the participants, the majority of participants reported to employ staff from a variety of different health professional backgrounds within their organizations and upon reflection agreed that the use of a multidisciplinary team approach would have been helpful in engaging more of their frontline staff in the change and could have positively impacted their BPG implementation.

Most allied health staff did not know and were unaware as to how they fit and why we're using them. Really what's involved in the guideline and what will this change mean to me and my practice. That was not part of our education or how the changes were presented at first to staff. I think if there's a lack of understanding around that, then they're not valued as much as they possibly could be. Lack of support... I was gonna say from management or from other health professionals outside of nursing. I mean pretty much anything. You wanna make sure that everybody's kinda on board and on the same page to have that strong support and it can't just be the nurses on the unit. Everyone needs to change (Organization #9).

The third specific mechanism identified in this study to better facilitate staff involvement in BPG implementation was the early and sustained use of point of care staff as practice change champions to support and facilitate staff education, training and adoption both during the initial BPG implementation as well as post implementation to ensure the changes are sustained. All participants interviewed reported a working knowledge of the role and influence of change champions in RNAO BPG implementation. For example, a participant at a hospital described:

We had some frontline staff on the working group, obviously not representatives of every unit, but we had some frontline staff on the working group and then we had BPG champions on each of the units where it was being rolled out. I think the most influence on whether the BPG is accepted or not would be the champions on the individual units (Organization #11).

All ten organizations reported to have used staff as BPG champions during the initial implementation of their BPGs but they selected and utilized staff as champions in a variety of ways. The champion role was filled by a wide range of staff at different levels within the organizations ranging from management to educators to point of care staff. The selection process varied across all ten organizations. Six of the ten organizations used staff and management volunteers as champions. One participant described their broad and less structured approach to champion selection:

I think that some of them were volun-told based on their positions within the facility. So managers, directors, CNSs, professional practice leads, all were required to take the first steps of training to become a champion. From that I would say you probably have about 95% of the people in those positions volunteered and were actually excited about being champions and excited about having a best practice (Organization #11).

Four out of ten used a more measured approach to champion selection reporting to have considered the employees' clinical skills and knowledge, level of influence over peers and general attitude toward change before choosing them as champions. One participant summarized their selection process:

It's not gonna come back to the staff. It's not going to come back to a manager. It's going to come back to us but I think the most influence on whether the BPG is accepted or not would be the champions on the individual units. I think that we've done a really good job of identifying champions on units and so when I think champions I, you know, also mean leaders and staff that are well respected. And I think that if we can get those people to be engaged and positive about the guideline we're trying to implement then... I mean those are the people that are influential. I can go to any unit in the hospital and I can say 'hey guys, we're gonna do this falls scale' and 37 nurses who've been working for 40 years are gonna tell me 'shut the hell up and leave our unit' but if I can get that one nurse who is the champion who can understand that this is evidence based practice and we will need to have better patient outcome, then those 36 other nurses are gonna jump on board. And so I think we you look at who's influential, I think it's the champions or the leaders on the units that you've identified and I think if you haven't identified those people then implementing your guidelines is probably one of the most hardest things you can do (Organization #11).

The number of champions involved in the BPG process within the organizations interviewed varied from three or four to close to 400 trained champions in one organization. All ten organizations reported to have prepared their champions in some way for their role in BPG implementation. Their preparation varied among participants from extensive training to very little. Six organizations made use of some aspect of the formal champion training courses or workshops offered by the RNAO to all BPSOs to help prepare their staff for BPG implementation. The training ranged from a single course lasting several hours to attendance at a week-long RNAO BPG training program where participants were provided with extensive training and evidence based tools and strategies to enable them to more successfully implement BPGs using evidence base approaches. The remaining four organizations reported to have provided very little preparation to their champions using their own internal resources by having their management team or other practice change leaders provide some education to champions prior to implementation of the BPG.

The involvement of champions in BPG implementation also varied by organization. Half of the organizations appeared to have fully engaged their champions early through membership on established BPG committees and working groups, providing opportunities for input on the development of new processes and tools and involving them in the development and execution of staff education and training. One leader shared:

If you have identified those leaders and you get them involved in the process early and you get them passionate about it then implementing a guideline is one of the easiest things you can do because it's coming from the staff. It's not something that you're trying to just facilitate on your own or do something out of thin air, right? Like you have the evidence in front of you and just to come up with those ideas or tools to use on the unit is easy because you have so many resources

around you that have been working for how many years and you're just giving them the evidence to do it (Organization #4).

The other half of the sample reported very little to no involvement of their champions in the early planning stages and minimal involvement during the initial implementation including staff education and training.

Champions' ongoing involvement varied as well. Four organizations reported the champion model was sustained formally within their organization after the implementation of BPGs was completed. Champions were reportedly retained and remained formally involved with BPGs through their membership or leadership on professional practice or BPG committees. For example one participant explained:

It's not a particular unit; it's the individual champions. So we have champions that represent all of our nursing units and we actually have a nursing practice council where the champions are part of the bigger council and then it branches down to the nursing unit based practice council. So the champions sit on the unit based practice council, they feed information up to the practice council group so they have representation facility wide so that we can look at things that first span the whole facility and we have other best practices that wouldn't have impact on other units (Organization #5).

The remaining six organizations reported that their champions remained involved with BPG work after initial implementation but in less formal ways. Champions were used by some in ongoing BPG staff education events and activities, to provide BPG updates at staff, unit and team meetings. All ten reported using champions as clinical resources or subject matter experts for other staff within the organization.

It's those kind of things that we like to use our champions for – to kinda highlight on their expertise as champions and what it does is it gives the nurses that work on other units someone to approach or ask questions about the change. Because our hospital is fairly large, and unfortunately our nurse champions don't work on every single unit so it gives them the opportunity to come to staff and unit meetings and provide an update on the BPG, answer any questions staff may have. It is also a chance for champions to share and identify as to what other units are doing to implement or sustain the BPG and how that's still being effective and

how's that's maybe something they can think about doing on their unit.
(Organization#11)

Regardless of the level of retained involvement of champions, all participants were unanimous in their support for using a champion model to involve staff more fully beyond initial implementation of BPG.s One leader summarized the value of the champions' model beyond the initial stages of BPG implementation nicely when commenting on the ongoing role of champions within the organization.

We pick people because they have demonstrated some energy but then we pick them and send them, it's almost like signing an agreement that "we're sending you because you've already done this but we also expect that you will continue to provide leadership". So we tend to tag into this group almost like an engagement group if we need further advice about how to get the point of care staff excited and engaged for the next one we need to implement. We actually just met with them last week, they are the group that said that they're waiting to think about how to make the next one more fun for staff (Organization #4).

The second sub-element of staff involvement in the NHS model is the use of staff ideas to inform the change process from the beginning. The model suggests that one of the main reasons for hesitancy and resistance by staff to change is lack of involvement, with involvement defined as motivating, training, informing and enabling staff to contribute to the improvement process (NHS Modernization Agency Improvement Leader's Guide to Sustainability and Spread, 2002). Findings in this study suggest support for this sub element. Results more specifically illuminate the importance of early and sustained engagement of front line management in the change process. Despite the fact that only three of the ten organizations reported to have made attempts to specifically engage managers early in the BPG process, all eleven participants stated that they played an important role in both the short term and long term success of a BPG in any organization and need to be active partners in any change process. Some senior leaders

interviewed said that in their experience early engagement allowed them to provide their staff and managers with the necessary background information and rationale behind the change, thus enabling a deeper understanding as to why the change was necessary.

How are we doing and are the initiatives that we've implemented making a difference? And that's been really key, I think, for sustainability and for engagement of the frontline especially. As I said, having the champions involved and the unit managers in the BPG implementation right at the beginning was a huge bonus in terms in terms of moving the BPGs forward (Organization #5).

Another specific finding in this study related to staff involvement was the importance of developing mechanisms to measure and share the results with staff and management about the impact of the BPG changes. Two organizations had developed a mechanism to share results with key stakeholders (e.g., weekly report on number of reported falls on a unit in hospital). In addition, most other participants who did not have this formal mechanism noted or mentioned the importance of regularly sharing results with staff as a tool to keep the BPG visible and viewed as priority after implementation. An example of this was evident and supported by a BPG lead describing efforts to involve both staff and management:

Well it was very up front and we were able to involve all staff and management. People at all levels were included in messaging so everyone knew it was also a high priority for the hospital and we needed to do this work. We had a big announcement ceremony and then they set up this inter-professional committee with membership from all units – both staff and management. Each unit would report back regularly to the larger committee on their individual units performance related to the BPG implementation on their unit and this worked really well to get everyone on board and taking more ownership of the results (Organization #2).

How are we doing and are the initiatives that we've implemented making a difference and that's been really key, I think, for sustainability and for engagement of the frontline especially. As I said, having the champions involved and the unit managers in the BPG implementation right at the beginning was a huge bonus in terms in terms of moving the BPGs forward (Organization #5).

Finally, the third sub-element of staff involvement in the NHS model, staff that are trained and empowered to run small-scale tests(PDSA) based on their ideas to see if additional improvement should be recommended, was also supported by the findings of this study. While only two out of ten organizations piloted their practice changes on a smaller scale before implementing them more broadly, nine out of eleven participants when asked if they trialed innovations prior to implementation identified the value and importance in running small scale trials to identify problems and make adjustments before wide scale implementation. The majority of participants thought this approach would have contributed more positively to staff compliance. One participant thought it would have been better had staff had an opportunity to try the process changes first and had input on ways to improve them as noted below.

... it wasn't like true PDSA cycles but what we would do is we created, along with the committee members, what it was gonna look like and we trailed it and then the nurses said this is way too long and that it wasn't gonna work. So then we changed it and we reduced it; the number of questions and then we did that and then they still had comments so then we changed it again. I'd say it probably took about 5 or 6 Meditech screens before we had it where the staff feedback was good (Organization #2).

4.2.2 Staff Training

With respect to staff training in sustaining practice change, the NHS model stresses the importance of two key sub-elements: 1. The provision of education and training to all staff in order to move the change forward, 2. Establishing a training and development infrastructure to help identify gaps in staff skills and knowledge (Maher et al., 2007).

In terms of the first sub element of staff training, findings in this study were consistent with the NHS model's emphasis on the need to provide staff with training and

education on the changes. Nine out of ten organizations provided formal staff training at the time of initial BPG implementation and it ranged from a few hours of classroom type instruction to full day or several day workshops in a variety of settings. Six out of ten reported to have ongoing access to BPG training and education post initial implementation. Access to the BPG training following initial implementation ranged from more formally scheduled BPG refresher courses or make up sessions to individually scheduled appointments with BPG leads or educators. One BPG lead describes their approach:

Then they did the 3 hour education ... we gave them the pain policy and the RNAO guidelines and the College Standards and they had to defend and we took real documentation and de-identified it. You know, we would have stuff like pain score was 7 and then it went to 3 and then it was 8 and then it was 8... you know, what to do about pain and all that. So that was really good (Organization #1).

More specific results in relation to staff training was noted by the majority of the eleven participants. Most reported that initial training during implementation of their BPGs was more widely accepted by their staff when delivered by staff peers, such as champions verses when more formal instructors such as an educator or professional practice lead. Six participants further identified the importance and effectiveness of providing follow up on-the-job training. Although only two organizations reported to have used this type of approach consistently, six reported that the provision of an opportunity for their staff to learn BPG changes from their peers while doing their job was a more successful approach and noted to improve staff compliance. One hospital organization reported:

We have found the training is best when provided by the advanced practice nurses, educators and champions, more formal education. But following that it is important to have follow-up training one every unit – specific to that unit so staff

see how the changes apply to their work on their own unit with their managers and others who do the work (Organization #2).

Another community participant shared:

It is a combination of in office and at the bedside. So they do a mixture of... you know, classroom where they would review the documents and how to use them. They're also watched at... you know, they have a patient load and somebody shadows them and they watch them do it as the bedside as well (Organization #2).

The importance of the provision of instructional training tools and resources to support and reinforce staffs' learning in the early stages of implementation is identified by the NHS model and supported by this study. Eight of the ten organizations reported to have provided some sort of training tools and resources to their staff at the time of initial BPG implementation. These tools included the introduction of a new paper based assessment tool; educational posters situated in work stations; resource binders and tool kits for instructions on proper BPG use located at nursing stations in hospital settings and; pre-assembled paper charts with new processes embedded in updated forms for easy access for community agencies. Furthermore, findings more specifically pointed to the importance of having ongoing and easy access to training tools and resources in the post implementation phase. Eight organizations reported to have continued to provide their staff with training tools after they were first introduced. One community participant reported:

A paper tool that's now part of the chart that they start on every patient. It gets assembled for them and they just pick these up and go. So we have screening and the intensity rating in the assessment form on our admission form... Yes, they don't have to run around and grab a whole bunch of sheets and... we've got it right there for them so that... that's not an issue kinda thing (Organization #17).

Another agency shared information about handheld computers for staff:

So we're going to look at some sort of PDF that they can pull up at the bedside as a resource to guide them through their intervention or their process and see if that,

you know, and it would basically have the tick box, you know, to ensure the assessment is completed and documented. A tick box kinda thing or something (Organization #17).

More specifically, in relation to staff training the majority of participants indicated the effectiveness of providing staff with easy to use self-directed learning materials (e.g., computerized, on-line learning modules, BPG tools and resources posted on internal websites). Four organizations specifically referenced the effectiveness of having self-directed, computerized learning materials available to staff after initial implementation. These participants noted that the self-directed tools allowed staff the option of revisiting the BPG educational materials and tools as needed to either refresh their understanding of the BPG or seek clarification on the process changes introduced at the initial stages of implementation. One community participant shared:

So if they were at home, they can access all those resources online and they could print it from home if they absolutely wanted to rather than going to an office. So the tools are very easy for them to access when needed (Organization #17).

One hospital participant shared how their use of on-line orientation resources was operationalized post implementation:

We're just trying to confirm and make sure this is actually happening, in the orientation there are several e-learning's that you have to complete and it's one of them. That is the idea. They have to do that e-learning and the e-learning is a two part and it goes through the assessment, what the falls logo looks like, what they need to do if they see these things and then how do you go through your assessment (Organization #4).

In terms of the second sub element of staff training, findings in this study were consistent with the NHS model's emphasis on the importance of establishing a training and development infrastructure. One participant provided an example of what the organization had done to build a developmental infrastructure within the organization:

So I would say orientation both corporate and unit based, documentation, building it into our balance score card. The development of mandatory education cause it comes out of orientation, we've got some learning modules that talk about our order sets and so those are for our clinical staff but we've created modified versions for our physicians (Organization #2).

Once again, results of this study continue to provide a far more detailed description of specific actions and efforts participants and organizations are putting in place in order to establish a training and development infrastructure for BPG work being completed within their organizations. For example, descriptions were provided by participants about training efforts and infrastructure being focused toward embedding practice changes into already existing processes whenever possible in order to enable and sustain the practice change. Seven organizations reported to have made efforts to embed their BPG related changes in a variety of ways. Some updated current paper forms or assessment tools with new BPG information or processes while others added mandatory text fields and templates requiring completion in currently used electronic health records.

It is an important part of sustaining because as soon as we implement something, we have to ask the question; how is this going to be sustained and it's got to be put into all of the places where staff are using it so our documentation tool has now been revised to integrate sections for all of our best practices. I think that once it's incorporated into our documentation and all that it... they don't even notice that they're doing it any more (Organization #17).

Some went as far as creating forced functions that would not allow the user to proceed without completing certain mandatory fields within the electronic health records to ensure compliance with newly implemented BPG processes (e.g. falls assessment on admission template in hospital setting).

The forced function meant that they could not save their vital signs unless they entered a pain score but we did eventually get to a point where we had it... they could choose sleep or chronic pain program. So we didn't make them wake a (patient) to ask them if they were in pain (Organization #2).

One participant further explained that sustaining BPGs post implementation can be challenging if processes and systems are not also changed or updated to support the change.

I think you have to embed all sorts of processes into place that are going to support the change because if you don't the change isn't going to happen. People are going to walk out of whatever it is that you're doing, whether it's you know an education program or a new booklet or whatever, they're gonna say 'that's fabulous, I'm gonna use that all the time' and they're gonna walk away and they're gonna slowly revert to their previous practice. So you need to do things that are going to, more or less, force them to change their practice (Organization #7).

Another specific example that some participants determined to be important for establishing a training and development infrastructure within their organizations was the inclusion of newly implemented practice changes in new staff orientation and training. Although only three organizations reported to have formally included BPG training into their staff training and orientation programs post implementation, six participants agreed that inclusion in more formal corporate orientation programs would ensure it was being done. One participant explains the benefit of incorporating BPG training in new staff orientation:

So we want all of our staff to recognize that everybody has a role and even if you are the OT you need to know if there is blood in the tubing that this is not something that we want to see so it's about everybody being committed. You would come in, you would see that right from the start and that is in our orientation for all of our clinical staff then our clinical staff go to their local units and then the units that have implementation specific practices then have additional education so our oncology units, there would be more detailed education in terms of what the comfort measures is, what does it look like? (Organization #2).

Another participant explained that once it was included in staff orientation there was greater accountability for the staff member and for their managers to ensure the BPGs covered in their training were being applied in their practice.

The managers are accountable for that. As I said, many of the e-learning modules are mandatory and it's... you know they're to be completed within the fiscal year and so that's the manager's responsibility. Each of the... well I mean ultimately it's each learner's responsibility and accountability and they all get a learning plan in the beginning of the year in terms of this is... these are your mandatory modules but in terms of follow-up and accountability that rests with the manager and that becomes part of the staff members performance appraisals that are done yearly (Organization #4).

So in terms of sustainability, as I mentioned, certainly having a section on BPSO best practice in nursing orientation, so right up front when people get hired, mandatory e-learning modules (Organization #5).

Lastly, in regard to the staff training sub element regarding the importance of establishing a training and developmental infrastructure, findings in this study demonstrated the importance of the ongoing development, revision and auditing of BPG post implementation to ensure it remains current, relevant and applied within that specific setting. Two organizations had a formal mechanism in place to audit the implementation of the BPG for compliance and none reported to have had the opportunity to revisit the change processes since the BPG's initial implementation to ensure they remained current and relevant to practice. However, eight participants made note of the value in reviewing and auditing the BPG process on a regular basis (e.g., yearly) to ensure they remain current and relevant in light of other organizational priorities and changes as well as to ensure they are being applied in practice. One participant shared her experience with regular auditing:

The other thing that we did is... initially we did not have the ability to do electronic audits so we were doing manual audits in terms of Braden completion rates and so we actually involved our frontline champions in doing those audits. Again provided some education in terms of what's an audit, the importance of consistency, we had a standardized tool, what to look for and that actually was a really beneficial process that grew into those champions actually providing feedback to their colleagues which was amazing in terms of results. Much better than if the CNS or the manager had done it (Organization #2).

One participant said they need to revise their original BPG tools as they were no longer relevant to staff with recent corporate changes to other documentation.

Some of the changes we made when we first implemented the first few BPGs we need to go back and change because we are hearing from staff that they are not working well anymore. We also changed our initial assessment tool recently and it is much longer now so staff stopped using other tools complaining about them being extra work for them now. So when we reviewed a few charts we're not seeing the tick boxes done and we are going to... we are re-visiting that to see how we can change it for them. Well I think because the way the tool is laid out, if you are a seasoned nurse and you know, you don't need to use the tool. You don't necessarily need to use the tick boxes and that to guide you through your assessments but I think they're being done just not necessarily on that particular tool so we need to change our process now that we know that so it makes sense for the nurses and not as much extra documenting for them (Organization #17).

4.2.3 Staff Behaviour

The NHS model emphasizes the significance of staff's attitudes and behaviour toward the change. The model further elaborates on this element by providing three sub elements: 1. Encourage staff to express and share their ideas regularly throughout the change process, 2. Staff input taken on board to adapt, refine, and/or modify the innovation and 3. The importance of staff being open to the change and thinking it is better way of doing things (Maher et al., 2007). Given the vast difference in size between some of the organizations who took part in this study, the participants' ability to report accurately on staff attitudes and behaviours related to the implementation of BPGs varied. Some of those responsible for BPG implementation worked very closely on a regular basis with front line and managers while others were less involved with the operational aspects of BPG implementation and sustainability. However, some common findings related to this staff element were noted.

That being said, the importance the NHS model places on the need to remain open to staff sharing their ideas throughout any change process was not highly evident in this

study. In this study, opportunities for staff to share their ideas throughout the BPG implementation process ranged from virtually no opportunity, to regular use of BPG newsletters or websites to share information, to very elaborate events where BPG leads and other staff presented their BPG outcomes, lessons learned and other related BPG innovations being used by staff within the organization or on specific units. Two organizations had formal systems in place to seek input from their staff on the BPGs and none of the remaining eight identified this element as a key contributing factor related to sustaining their BPG changes.

When considering the second sub element of staff attitudes and behaviours, the model's emphasis on providing staff with opportunities to adapt, refine or modify the innovation after implementation was evident in this study. Four organizations reported to have provided their staff with these types of opportunities with good results. These opportunities ranged from one organization's yearly formal review of policies and procedures related to BPGs as well as the development of a formal BPG review panel charged with yearly reviews of the implemented BPGs, to all four organizations reporting the use of surveys to solicit formal requests for feedback from staff and managers. All four reported some type of evidence of less formal and unsolicited feedback from frontline staff eager to make improvements.

I think they're pretty excited about it. When we implemented... and I think now it's just the way it is, right? But we are now re-looking at it and we're putting out the word and so people are trying to get input on what they think might wanna be changed about it, was it... we did this in the falls committee. They wanted a program that asked if we could make more recommendations and so we did a whole lit review around falls prevention and then we looked at what we'd been doing then we looked at a lit review to see was there more that we should be doing. And now based on new things we have learned staff are helping us to revise our falls prevention policy. We are doing good work but staff are open to trying to improve it even more (Organization #12).

Next, in relation to the third sub element of staff attitudes and behaviours, findings in this study support the model's acknowledgement that in order for change to be sustained staff need to be open to the change and think it is better way of doing things. Over half of the organizations interviewed reported that staff's openness to the change was a key factor in their success with sustaining changes. One participant shared an example of successful practice change depending on staff's attitude toward it.

I think the staff, from a frontline perspective, kinda identify that there is a validity to the assessments and to those RNAO guidelines. So I think that they were really well received and that because it wasn't really that much additional work, you know, needed for the staff to do that and with the 10 minute blitz's, you know I mean that... unfortunately the way the facility works now is that's how we capture our audience with a 10 minute quick information session on, you know, a simple assessment. So I think those guidelines are really well received. I think there are other guidelines that maybe are not so well received but I... I don't it's the guidelines themselves. I think it's more the added work on the nurses. Whether it comes from a guideline implementation or another practice change when things start to snowball and they kinda continually get thrown at a unit then I think the attitude kinda shifts a little bit from 'I can totally see how this will help my patient' to 'oh my god, something else that I have to do' (Organization #11).

In addition to this finding, results more specifically identified the negative impact of staff's perception of too much change all at once and its impact on an organization's ability to sustain changes over a longer term. The term change fatigue was used to describe this phenomenon, identified by four organizations as a significant concern. For example, one participant said:

Challenging. So the first BPGs that we rolled out on the pilot units were great uptake, lots of enthusiasm. As... because there's some units that are implementing 3 BPGs within the 3 year frame and so each... as we've added on successes in BPGs it's been overwhelming for staff and it's taken its toll to be honest. It's a lot and BPGs and BPSOs is not the only initiative that's going on at the unit level, right. So staff are feeling or have felt quite inundated (Organization #5) .

Another participant explains a perspective on the impact of too much change all at once on staff.

Way too many initiatives. Just way too much stuff coming at us. I think I speak for all of us. I'm just going to do a general 'us'. And I'm sure we're not the only organization in that boat unfortunately. They're just, you know, I think one of the biggest barriers in terms of sustainability is that it's just hard to build sustainability in because you're barely finished implementing one thing and then there's something else coming at ya. And, you know, as an organization, I think it's... you know, I can only speak through our lens, I think it's something... it's definitely an area for improvement but I would say that that's the biggest... kinda the biggest, hurdle (Organization #5).

Following is advice offered by a participant on this issue of change fatigue and its impact on staffs' openness and receptivity to more change.

I think the key lesson for me and for us certainly, speaking on behalf of some of the BPG leads, is that in 3 years to implement one BPG on a unit and to do it really well just do one. Don't do two or three on a unit. I mean a BPSO candidate you need to implement a minimum of five BPGs, spread them out across units. Don't try and do two or three on any one unit. If you wanna do it really well and really build in that solid sustainability do one per unit. That's been the biggest piece of kinda reflection for me as I look back at our proposal and, you know, you kinda have to re-read it and go through it every once in a while. It's like 'oh my goodness', what was I thinking? (Organization #5).

Providing staff with the rationale and motivation behind the need for a change was also a specific theme identified by over half of the participants as an effective mechanism in helping to shift staff's attitudes toward a change. Organizations involved ranged from research and teaching hospitals where the use and implementation of practice changes in relation to evidence based practice is quite common to very small community health organizations where the RNAO project was their first experience with implementing these types of practice changes. Therefore, the degree of motivation and explanation needed varied across all ten participant organizations but five of them

identified the importance of this sub element in sustaining practice change. One participant shared the following:

So the department of nursing has always very much had a culture of best practice to begin with. Even before applying to be a BPSO candidate we had started to do a fair amount of work with our frontline staff in terms of quality improvement, PDSA cycles and touching a little bit on research and looking at best practice guidelines. So it seemed kind of a natural evolution and a natural fit to think about becoming a Best Practice Spotlight Organization. There were already some units doing... implementing best practice guidelines so it was a matter of kinda formalizing the process. I did not need to do a whole lot of convincing that the BPGs were a good thing to do (Organization #5).

Another participant shared a very different experience in relation to the rationale and motivation sub element.

We spent a lot of time talking to staff about the impact of falls on our patients and on costs within the hospital itself. I found some good stats on the cost of a fall to the health care system and we added this information to the education we did when we rolled out the falls prevention BPG. I remember spending a lot of time explaining that to staff and the light bulb moments many of them were having once they understood the bigger picture when people fall. I think that is our best BPG with the biggest staff buy in our of the ones we have done. Units now compete with each other to get the lowest number of falls per months. It's great, they really buy into it now (Organization #2).

Although the NHS model does not specify the importance of front-line managers, findings in relation to staff attitudes and behaviour indicate the value in engagement and support of respected and credible front line managers because of the supporting role they can play in motivating and inspiring staff to make the necessary changes to practice. Efforts to gain front line managers' (e.g. department managers, unit managers, clinical supervisors, unit nurses, etc.) support ranged from doing very little to engage and involve them to full involvement throughout the BPG implementation process. Involvement of managers was varied across organizations and included such things as participation in BPG selection, membership on BPG steering committees and working groups,

involvement in the development and execution of staff training, the development of new BPG processes as well as, post implementation follow up with their own staff to ensure adherence to practice changes and follow up with staff post implementation to ensure compliance and adoption of new BPG processes. Although only three organizations made concerted efforts during BPG implementation to involve and engage front line managers and gain their support, seven of the eleven participants identified front line manager engagement and support as key factors in successful BPG implementation and sustainability. The importance of support from managers was noted in this comment.

When you're trying to get staff involved and you're trying to get staff to change practice, it's much better and more effective if you have the managers involved. So we've used our champion model so each of the units has their own BPG champion to explain the need for the change and how it relates to better patient outcomes and to model the change. We really use our champions in terms of that and then the clinical educators and clinical nurse specialists as subject matter experts to staff and we've also gotten better at involving our manager in terms of what's coming down the pipe (Organization #4).

Another participant whose organization had struggled with achieving success with BPG implementation shared the following insights about management support:

It's one of those engagement pieces where because we're the office that does this and we focus on the entire implementation of the guidelines, one thing that we've identified as something that we have to do is getting managers more involved. We have to get more of our management team on board and involved in each of those implementations so that they can hold their staff accountable for not doing that. We will get nowhere if the unit manager is not supportive of the change. The units we have had the most success we have managers who have supported us and want the change. We have one manager who keeps reminding her staff every single day about the falls prevention tool and why it's helpful. I've actually witnessed champions on units now telling staff what they have heard their manager say. Say 'this is why we do a falls assessment, this is why you should have done your falls assessment when you should have done it'. So I think people are kinda becoming accountable for themselves so it's better (Organization #11).

Finally, the last finding that provides more specificity in relation to NHS model's staff attitudes and behaviour element is the support of key peer opinion leaders. Four

organizations identified the support of credible staff as a key element in BPG sustainability. Staff support was demonstrated in a variety of ways by staff ranging from quite adoption and use of the new BPG and associated tools into their practice to more outward and public support through active promotion of new practice in staff and team meetings or a willingness to support peers to use new BPG. One participant explained a successful approach to gaining support from key opinion leaders in the organization.

Because if the older nurse doesn't see value in it, you're not going to get any change or minimal change. In our environment, we have had some nurses with us for thirty five years. When I was ready to work on these, I picked one nurse who I knew would be helpful in getting it done and then I picked another who I knew would not want to change. I sent them both to the week-long training and when they got back they had to work together on it and get it up and running on their large medical floor. By the end, they were the reason it worked ..staff listened to them and they made the changes fit with what they were already doing so staff did not see a jump in work. I can't manage everything, so we really need to staff nurse on board. They're our number one stakeholders. That's how our model works (Organization #17).

4.2.4 Senior Leaders

In terms of senior leaders' influence and impact on sustained practice change, the NHS model stresses the significance of four sub elements: 1. Their involvement, understanding and promotion of the change, 2. Their trustworthiness, influence and believability, 3. Their respect and influence on peers, and 4. Taking personal responsibility to break down barriers to ensure success (Maher et al., 2007).

Findings in this study provide evidence about the first sub element of the model. In particular, in this study, involvement, understanding, and promotion of the change meant their ongoing provision of human and fiscal resources. This was a key enabler of long term practice changes for seven organizations. The other three sub elements of senior leaders' influence were not described by the participants in this study.

Support from senior leaders, in the reports of the participants, was manifest and evident in a variety of ways across organizations and ranged from almost no visible signs of support to full support demonstrated each year through the ongoing dedication of fiscal and human resources for new BPG implementation as well as for the maintenance of existing BPG infrastructures within organizations (e.g. professional practice leads, BPG leads, educators, committees, etc).

One organization that devoted little to no fiscal and/or human resource support to the BPG project met with limited success as evident in one participant's comments.

I mean, at that point in time until we started our candidacy period, as far as I know, we didn't have one particular person who was specifically mandated to work on the BPSO to support the designation but we did have a few keen staff members who had applied for fellowship and kind of stepped in. From what I understand that's how it kinda all got started with that. Yes and no. They support them in theory. We don't get a lot of financial resources to assist us in disseminating the information and doing a lot of the work that we need to do so we definitely have a bit of a mismatch there but they do... they want us to be, you know, using these guidelines, they want us to roll them out however they're going to have to start throwing some resources at us (Organization #11).

A more successful organization pointed to the difference that dedicated resources made to the overall success of their BPG projects long term.

Our associate chief of nursing practice who was kind of overseeing me to do this and was involved from the very beginning, ...and she is very involved so that is helpful. She is the key vehicle - gatekeeper to resources, so her interest in the project ensures that the money flows to a project even now that we are a BPSO (Organization #10).

4.2.5 Clinical Leaders

Finally, in relation to clinical leadership, the last staff element within the NHS model, three sub elements are identified in relation to sustained practice change indicating that clinical leaders are required to be 1. Involved understand and promote the change, 2. Trusted, influential, respected and used as clinical resource or subject matter

experts by staff, 3. Involved early in the change initiative enabling them to better understand, promote and take personal responsibility for the practice change (Maher et al., 2007).

Results in this study were consistent with all three of the NHS model's clinical leadership sub elements. The data supported the notion that success is more likely when clinical leaders are involved early and actively promote the change with staff. Four organizations had made efforts early to in the BPG implementation process to have clinical leadership involved in promoting the clinical changes with staff, while two others brought clinical leads on board to support the clinical teaching after initial implementation. As with previously discussed elements, there was a range of the extent of involvement of clinical leadership, from a part time clinical nurse working a few days a week in a small hospital; to clinical nurse specialists involved in initial staff training, and orientation; to dedicated and ongoing support in larger hospitals where clinical leads were actively involved with staff in skills training and auditing for compliance and adherence to the BPG processes. One participant explained:

So we spent a lot of effort and a lot of time engaging the frontline staff and the clinical nurse specialist. The thinking behind that was that the clinical nurse specialist and the educators, they were going to be marketed as the content experts - you know whether it be for pain or pressure ulcers and the educators were are going to help us disseminate this. We had two full time clinical leads involved and dedicated to the project from the beginning (Organization #5).

Furthermore, half of the participants reported the importance of clinical leadership being visible to staff and viewed as clinical resources and subject matter experts. The importance and value one participant personally placed on the clinical leads is evident in this comment:

They all have a good relationship with their nurses and they're certainly very visible. You know, they are there every day and somebody's always on call, so they're very accessible. It's not like they work only to 4:30. They're nurse educators. Their sole responsibility is education, policy development and supporting nurses on the front lines (Organization #17).

Another participant shared that it was the clinical lead's involvement that made the difference for many staff, describing the clinical lead's passion, clinical expertise, years of experience, work on developing sustained tools, and credibility that "got many of the unit nurses on board with the changes brought in" (Organization #2).

One organization claimed it was their clinical lead's passion, clinical expertise and years of experience that got many of the unit nurses on board with the changes brought in (Organization #2).

Conversely, for another larger organization it appeared that the lack of visibility and easy access to a subject matter expert was a contributing factor to the self-reported poor implementation of a BPG. Not being physically visible and present to staff on a regular basis to support them was identified by this participant as a big challenge despite efforts to link via regularly scheduled teleconferences:

We usually open by people sharing activities. Sometimes they talk about challenges and the rest of the group steps in to support them on how they could get through them. It's really hard to support them not being there and working beside them. I really think that for most who dial in they are not fully applying the BPG changes. We are always available to them if they want us to contact them one on one but I rarely get called for that type of support (Organization #7).

Better results were noted by three organizations when clinical leaders took more personal and professional responsibility to promote change.

To summarize, the findings in this study align quite closely with the majority of the key staff elements and sub elements within the NHS Sustainability Model. The

findings provided examples of most of the key staff elements and sub elements. The exceptions were:

- Staff encouraged to share ideas (staff behaviour element)
- Senior leaders who are trusted, influential, respected and believable (senior leaders element)
- Senior leaders who are respected by their peers and can influence others to get on board (senior leaders element)
- Senior leaders who take responsibility to help break down barriers and give time to help ensure the change is successful (senior leaders element)

The importance of the active participation and ongoing support of staff and management stakeholders, the necessity of formal and ongoing training and easy access to training resources and tools, the importance of understanding staff's attitudes and openness to the change, as well as the value of visible and well respected clinical subject matter experts to support and ensure practice changes occur were all evident in the data.

In addition, this study findings detail practices and experiences that extend beyond the elements and sub elements in the model. They were noted by participants and elaborate on the NHS model. They include:

- the importance and value of the initial and ongoing use of point of care staff in working groups to develop and design the innovation
- use of staff as champions of change and actively involved in training and development of staff
- the incorporation of more on the job training where peer-to-peer learning can occur

- ongoing and easy access to tools and resources related to practice changes
- the incorporation of practice changes into already existing processes
- early engagement and ongoing inclusion of point of care managers and key opinion leaders in the practice change
- ongoing fiscal and human resources to support, revise and improve upon practice changes long term

The model stresses the importance of soliciting ongoing input from staff on practice changes as well as the trusted and influential senior leaders who understood and promoted the change and take personal responsibility for its success. However, the findings in this study did not provide sufficient evidence of the significance of either of these factors on the long term sustainability of practice changes for those involved in this study.

4.3 Summary of Findings in Relation to Sustained Practice Change

This section presents findings of a comparison of practices of organizations that achieved sustained practice change and those where practice change was not sustained. The determination of whether an organization was successful in sustaining the BPG change(s) originally implemented was based on a comparison of each organization's self-assessment tool results, the information shared in the interview, and the researcher's memos relative to and in comparison to the definition of sustainability used in this particular study. As a reminder, for the purposes of this study, sustainability is defined as: "When new ways of working and improved outcomes become the norm" (Maher et al., 2010, p. 4). This implies that whatever changes were initially implemented with the respective RNAO BPGs needed to be shown to some degree to still be in place. To be

classified as “successful”, an organization had to have demonstrated that it has “been able to withstand challenge and variation; it has evolved alongside other changes and perhaps has continued to improve over time” (Maher et al., 2010, p. 4). There would have to have been some evidence of the processes and outcomes put in place at the implementation stage still being in place to some degree and at the very least, that processes and outcomes had not reverted back to the previous ways of working (Maher et al., 2010).

These criteria were used to classify the ten participating organizations. Of the ten RNAO BPSO organizations that participated in this study six were found to have sustained practice changes while the remaining four were found to have been unsuccessful in their efforts to sustain the changes that they originally implemented. The data were then further analyzed and sorted into two groups: (a) findings common to organizations that sustained practice changes; and (b) findings common to organizations that did not sustain practice changes. Table 4.3 summarizes the comparisons, organized by NHS Sustainability Model elements. The findings are described in text below.

Table 4.3

Summary of Comparison of Organizations with Sustained and Not Sustained Implementation of BPGs

Characteristics of Organizations Classified as Sustained	Characteristics of Organizations Classified as Not Sustained
NHS Element: Staff Involvement	
1. working groups sustained - formally or informally	
2. Champions: champion model used to engage staff and support the change	no champions model used to engage staff and support change
champions provided with training to become champions	
champions involved with implementation & staff training	no champions involved with implementation & staff training
champions retained following implementation to support BPG	champions not retained following implementation to support BPG
3. early and sustained involvement/support of key stakeholders - staff and management	no early involvement/support of key stakeholders - staff and management
NHS Element: Staff Training	
1. Formal Staff Training: formal staff training delivered at implementation	no formal staff training delivered at implementation
ongoing access to staff education and training	no ongoing staff education and training
2. Instructional Tools: provision of instructional tools and resources	limited provision of instructional tools and resources
ongoing access to instructional tools and resources	limited access to instructional tools and resources
3. access to self-directed learning tools	no access to self-directed learning tools
4. practice changes embedded in process	no practice changes embedded in process
5. inclusion of training in new staff orientation/corporate training	no inclusion of training in new staff orientation/corporate training

NHS Element: Staff Behaviours	
1. opportunity to adapt, refine and or modify the innovation	no opportunity to adapt, refine and or modify the innovation
2. staff open and/or receptive to change	staff not open/receptive to change
3. change fatigue	change fatigue
4. rationale and motivation provided to staff for the need for change	limited rationale and motivation provided to staff for the need for change
5. management support	none or little management support
6. engagement and support of peer opinion leaders with credibility	no engagement and support of peer opinion leaders with credibility
NHS Element: Senior Leaders	
1. ongoing human and /or fiscal resources to support practice change	no/little ongoing human and /or fiscal resources to support practice change
2. BPG infrastructure supported (e.g. BPG leads identified)	no identified BPG infrastructure identified (e.g. no BPG leads)
NHS Element: Clinical Leaders	
1. early involvement - understands and promotes the change	no early involvement to support and promote the change
2. respected by staff-trusted/influential clinical expert/SME	no clinical expert/SME - not easily seen and used as clinical resource
3. personal/profess responsibility to promote change	no personal/profess responsibility to promote change

With respect to the staff involvement element of the NHS Sustainability Model, organizations that were found to have successfully sustained their BPG practice changes paid particular attention to three main factors in relation to this element of the model. Those who focused less on these factors met with less success. First, sustained practice change was noted more often when organizations established working groups early in the implementation phase and ensured the working groups had representation from a variety of subject matter experts, staff and management to help inform, design and support the innovation.

The second difference with respect to this element was the effective use of staff as champions. Although the use of champions was noted by all organizations, those who

sustained their changes seemed to have invested more time and resources into the development and successful retention of their champions. For example, success was noted when organizations carefully selected the right person to develop into a staff champion, when they provided additional training to better prepare staff for their champion role, as well as when they involved champions more completely in the implementation and staff training phases (so they were identified very early as the subject matter experts and support for the BPG changes). Successful organizations were also noted to continue to invest in their champions by involving them in other related education or process development activities, even after the initial implementation phase was over.

The third difference in the staff involvement element was that organizations found to have engaged and involved staff and management early and often throughout the implementation phase and beyond met with greater success. Various methods and approaches were identified by participants to seek staff and management input, advice and feedback on the BPG process they were implementing. No one approach was credited with success but those who did not make efforts to engage these key stakeholders were unsuccessful in sustaining change.

There were five key factors related to the staff training element of NHS model that were identified as common to organizations that had successfully sustained their BPGs. The first factor is the provision of formal training to staff during initial implementation **and** ensuring that education and training remains accessible to staff post implementation. Secondly, success was noted when staff was provided with instructional tools and resources to support their learning and their ability to apply the process changes

early in the implementation phase **and** when there was ongoing and easy access to these tools post implementation. Thirdly, organizations that invested in the development of self-directed learning tools made easily accessible to staff while on the job (e.g., computer programs) were noted to meet with greater success in sustaining practice changes. The fourth commonality that was noted in successful organizations was embedding practice changes in current process whenever possible. This supported and prompted staff about the changes in the early stages of implementation and, later, ensured compliance with changed practice. Finally, the fifth commonality when BPGs were successfully sustained was the inclusion of BPG training in new staff orientation to ensure instructional tools and resources were shared with all new staff.

In relationship to the staff attitudes and behaviour element of the NHS sustainability model, there were six factors in common to successful organizations. First, if staff were given the opportunity to adapt, refine or modify the process change after implementation to continue to improve the process, greater success in sustaining change was noted. Second, if staff were open and receptive to the changes, BPGs were more easily implemented and the changes were sustained long term. However, if staff were not open to the changes involved in the BPG implementation phase or were overwhelmed with too many changes, long term sustained success was not evident. Thirdly, sustained change involved ensuring that change leaders provide the necessary rationale and motivation point of care staff, so they are clear as to why the changes are necessary. This leads to the fourth factor, which is support from front line managers. If managers did not support the change, organizations struggled to achieve sustained change. Managers were found to be significant importance in helping not only to develop process changes, but

also helping to facilitate greater staff compliance through the use of regular audits and other performance measures that supported BPG use. Finally, success with shifting staff attitudes and behaviours was noted more often when organizations engaged the support of the informal opinion leaders within their organizations.

With respect to the senior leadership element of the NHS model, organizations that met with greater success had senior leaders' committed to the provision of ongoing human and fiscal resources to support practice change(s). Participants in organizations categorized as sustained reported that it was their initial and ongoing investment in the BPG projects, both financially and through the assignment of dedicated staff and management to the BPG projects, that contributed to success. As noted in the previous section of this chapter, other aspects of the senior leadership element of the model were less evident in the data.

With respect to the last element of the NHS model, clinical leadership, success was noted in organizations that made early and ongoing use of their subject matter experts through the identification of clinical leadership to help support and visibly promote the change. Greater success was noted in organizations that had trusted and influential clinical leaders who took personal and professional responsibility for the practice changes sought.

4.4 Overview of Major Study Findings

The major study findings are summarized in Table 4.4. The insights and findings related to the long term success of an organization in sustaining practice changes were found to be complex and multifaceted in nature. Overall results from this study can be summarized into five key findings in relation to sustainability. First is the importance of

early and sustained engagement and frontline staff, managers, and clinical leaders in planning, implementation and ongoing development of BPGs through use of working groups and champions models. Second is the importance of ongoing provision of formal training, tools and resources to all key stakeholders during and after the implementation phase and efforts made to embed changes in current processes whenever possible to ensure sustainability. Third is to ensure staff and management are receptive to the proposed change(s) and/or have been given the necessary background information and rationale so they understand and can support the need for the change. Fourth is the need for early and sustained fiscal and human resources dedicated to supporting BPG implementation and the ongoing use of the BPGs already in place. Fifth is ensuring clinical leaders are trusted, influential, respected and seen as clinical resources by point of care staff.

Table 4.4

Overview of Major Study Findings

Overview of Major Study Findings	
1. Staff Involvement	Early and sustained involvement of point of care staff, managers, and clinical leaders in planning, implementation and ongoing development of BPGs through use of working groups and champion models.
2. Staff Training	Early and sustained availability of formal BPG education, training and resources for staff and managers and when possible embedding practice changes into current processes and infrastructure to ensure sustained use.
3. Staff Behaviours	Early and sustained engagement of staff and management through provision of rationale and motivation behind the change.
4. Senior Leaders	Senior leaders' early and sustained provision of fiscal and human resources dedicated to support new practice changes and those already in place.
5. Clinical Leaders	Clinical leaders who are trusted, influential, respected and seen as clinical resources by point of care staff.

4.5 Findings

This chapter presented the findings of the thesis research. The sample was described, the extent to which the findings were consistent with the NHS model and were consistent with it was described. Findings that elaborated on the model were described. Organizations that achieved sustained practice change were compared to those where practice change was not sustained were compared with respect to the NHS Sustainability Model. Finally, the major findings of the study were summarized in brief. The following chapter discusses the findings.

Chapter 5

Discussion

5.1 Key Findings

The findings from this study help to progress our understanding of how certain factors related to staff can influence (contribute to or hinder) the success and sustainability of practice changes within health care organizations. As the five key findings in this study support the factors within the staff element of the NHS Sustainability Model, results can also serve to validate the model as a useful tool for health care leaders to help guide and inform their approach to staff in their efforts to implement practice changes since. Specifically, the study has helped to further illustrate the importance of:

1. Early and sustained involvement of point of care staff, managers, and clinical leaders in planning, implementation and ongoing development and/or modification of the innovation through the sustained use of working groups and champion models;
2. Early and sustained availability of formal education, training and resources for staff and managers and, when possible, embedding practice changes into current processes and infrastructure to ensure ongoing use;
3. Early and sustained engagement of staff and management through provision of the rationale and motivation behind the change;
4. Senior leaderships ongoing support and provision of human and/or fiscal resources to sustain the practice changes; and
5. Ongoing and easy access to clinical leaders who are trusted, influential, and respected by point of care staff.

In this chapter, these key findings will be discussed in relation to the current literature.

5.1.1 Staff Involvement: Working Groups and Champions

Despite the fact that participants in this study represented a variety of health care organizations and varied in staff size and resources available for BPG implementation, all reported the importance of involving staff in some way in the change process. Findings related to staff involvement, the first staff element of the NHS model and its relationship to the long term sustainability of practice changes will be discussed first followed by a more focused discussion of findings as they relate to the involvement of staff in working groups and as champions throughout the change process.

In relationship to staff involvement in general, all participants reported the importance of engaging a wide variety of staff at all levels within the organization in the proposed and actual practice change. Although participants were found to engage and involve staff differently and involved a wide range of staff from point of care staff, clinical experts and managers to senior leaders and executives, all eleven participants agreed that the involvement of staff in some capacity to inform the change was an essential component to successfully sustaining practice changes long term. This result adds to the existing knowledge on sustainability as it relates to the importance of involving staff in the change. Several authors agreed that when staff and management are involved and afforded the opportunity to provide input into the proposed change, the more likely the practice change will be compatible and suitable to the local context and therefore more likely to be adopted and sustained long term (Davies et al., 2006; Greenhalgh et al., 2004 1b; Loman et al., 2010; Matthew-Maich et al., 2013; Smith-Higuchi et al. 2012; Stetler et al., 2009 ; Stirnam et al., 2012; Umar et al., 2009).

Results of this study further suggest that staff and managers' engagement and involvement should begin early and be sustained well beyond the initial implementation phase. Successful organizations in this study were found to have made long term commitments to involve staff at regular intervals post implementation for review and modification of the practice change to ensure it remained current and relevant. Greenhalgh et al. (2004 1a), Umar et al. (2009), Stetler et al. (2009), and Loman et al. (2010) found similar need for early engagement of staff and management. More recently, Smith-Higuchi et al. (2012) and Matthew-Maich et al. (2013) more specifically point to the need for sustained opportunity for staff and management to provide input and feedback to adapt, refine and/or modify the innovation to suit the changing needs of staff and management.

Over half of organizations within this study and all of the six found to be the most successful, chose to involve and engage their staff through the formation of formal or informal working groups. Although varied in structure and size, the greatest success was reported when working groups were comprised of a combination of well-respected subject matter experts, frontline staff, and managers, with the common purpose of supporting the implementation of a practice change. The effectiveness of establishing working groups in efforts to implement and sustain practice change was not found explicitly in the current literature on sustainability. However, findings were noted in the literature related to the effectiveness of soliciting staff and management input and feedback in general when engaged in practice changes. For example, Davies et al. (2006) noted in their examination of the long term sustainability of RNAO BPGs in seventeen BPSOs that staff involvement and ownership were identified as key facilitators.

Greenhalgh et al. (2004 1a), contributes further by noting that change was more readily adopted and sustained if staff feedback and input was considered and when staff was given the opportunity to adapt, refine and or modify the proposed practice change prior to implementation. Consistent with this recommendation for input prior to implementation, working groups were reported by participants to be most effective when assembled in the initial planning stages of the practice change. Input from the working groups was found to be effective in ensuring practice changes were understood by staff, adapted and modified to fit the specific needs within the organization. In addition to early involvement of staff and managers, it was important to reassemble the working group at frequent intervals, including after implementation to ensure the changes remained relevant (Umar et al. (2009); Matthew-Maich et al. (2013)). These thesis research findings were consistent with this conclusion.

Unique to this sustainability study and adding to the literature in this field of study is the importance of engaging a multidisciplinary team or working group to support practice change. Although only four of the ten organizations reported to have established multidisciplinary teams to work on their BPG implementation, all participants identified its importance. The engagement of a multidisciplinary team made up of staff and managers from diverse and varied health professional backgrounds was reported to be an effective strategy to ensure practice changes met the needs of all staff within an organization. Participants believed that this approach had a large impact on staffs' attitudes toward the BPGs, especially those involving a change in practices that were involved multiple professions (e.g., falls prevention).

Also unique to this study is its findings in relation to the effectiveness of working groups designed and intended to support practice change. Smith-Higuchi et al.'s (2012) study was the only study found referring to the use and development of working groups to support practice change implementation, with membership consisting of various frontline staff, clinical and senior leaders within the organization. However, findings did not specify the overall effectiveness of the steering committees in supporting initial implementation nor that of sustained practice change.

All the sustainability studies reviewed found that early involvement of staff and management to varying degrees is important but none were found to specifically point to the importance of the long term, sustained involvement of key staff and managers in change efforts as was noted as a key and unique finding in this study. Smith-Higuchi et al. (2012) found that organizations do not typically have sustained working groups; less than half the organizations in their study reported to have sought ongoing formal or informal input from staff to allow for modifications or adaptations post implementation and one of seven reported sustaining their BPG steering committee permanently.

All organizations within this study chose to involve and engage their staff through the use of champions. All strongly agreed with the effectiveness of using champions to support practice change and noted that staff selected as champions were particularly effective when actively involved in the initial planning, staff education and implementation of the practice change. Greenhalgh et al. (2004 1a), Stetler et al. (2009), Davies et al. (2006), and Matthew-Maich et al. (2013) all came to similar conclusions in relation to the importance of staff as champions. They noted that the adoption and sustained use of an innovation was more likely if key individuals, or champions, within

the organization were involved from the beginning. They also noted that when champions were actively participating in implementation, staff training and demonstrated visible and ongoing commitment to the success of the project BPG implementation was more successful.

Participants in this study reported different and varied approaches used for the selection of champions within their own organization but most suggested the importance of careful selection of staff as champions. Champions were reported to play pivotal roles within successful organizations in this study and participants stressed the importance of careful selection of champions, based on their recognized clinical skills and knowledge, their level of influence over peers, and their attitude toward the change. Greenhalgh et al. (2004 1b) and Umar et al. (2009) both agree that the careful selection of champions is of the utmost importance. Both agree that champions need to be true opinion leaders, respected and able influence the beliefs and actions of their peers in order to support the successful implementation of a practice change.

Although the use of champions in the early stages of BPG implementation was common in the organizations studied, findings in this study suggest that there is benefit to organizations that make longer term investments in their champions. This finding of the importance of sustained support and use of champions adds to the existing literature in this area. Organizations that continued to invest in the ongoing education and development of their champions and were successful in retaining champions post implementation to support the practice changes demonstrated greater success in sustaining change long term. The most successful organizations were found to have

dedicated resources for the purposes of training, educating and retaining their staff champions.

5.1.2 Staff Training: Education, Training and Resources and Embedding Change into Current Practice

This study's closer examination of staff training, the second staff element of the NHS model, and its relationship to the long term sustainability of practice changes illustrated the importance of: 1. ensuring all staff and managers are provided with formal training and easy, ongoing access to the necessary tools and resources to enact the change in practice, and, 2. whenever possible, embedding the practice changes into current processes and infrastructure. In this section, the findings related to training, education and resources will be discussed followed by findings related to embedding practice changes into existing processes.

Success was more often noted when training was presented more formally to both staff and management, when training materials and resources were made available to supplement the training and when training was perceived as relevant to their current practice and tailored to their local context and work environment (e.g. training for nurses in the community verses those in hospital environment). The findings in this study related to the importance of staff training add to the existing literature on sustainability. Several authors suggest that staff training is of great importance and must be carefully considered in order to successfully to implement and sustain a practice change (Davies et al., 2006; Greenhalgh et al., 2004 1a & 1b; Loman et al., 2010; Matthew-Maich et al., 2013; Matthew-Maich et al., 2013; Smith-Higuchi et al. 2012; Stetler et al., 2009; Stirnam et al., 2012; Umar et al., 2009). Umar et al. (2009) also noted poor training as a

barrier to sustainability and negative outcomes were associated when staff was poorly trained and prepared for the change. To varying degrees, Greenhalgh et al. (2004 1a & 1b), Stetler et al. (2009), Davies et al. (2006), Loman et al. (2010) and Matthew-Maich et al. (2013) found that staff training was most effective when it was formally provided, targeted and included the provision of quality resource materials.

Easy access to the training materials and resources post implementation was also a key finding here. The most successful organizations reported to have continued to offer the practice change training at regular intervals throughout the year for staff and developed various approaches tailored to their environment (e.g. on-line modules, resource binders, lanyards, posters) to ensure staff had easy access to the necessary BPG training and resource materials. These efforts to ensure the provision of easy to use platforms to store and share BPG materials on an ongoing basis was a key factor reported by all six of the most successful organizations. Davies et al. (2006), Stetler et al. (2009), Loman et al. (2010) and Matthew-Maich et al. (2013) also concluded that it is the early and ongoing access to practice change training and materials that contribute positively to the success of a sustained change. Davies et al. (2006) expands further to conclude that practice changes are, in fact, negatively impacted when access to ongoing education is limited which was supported by the findings in this study. The majority of successful organizations in this study offered training beyond initial implementation while all that were unsuccessful in sustaining change ceased offering training beyond the initial phase.

Embedding the practice changes into already existing processes was another key finding related to the staff training element of the NHS model. Organizations that were found to be more successful linked their success in sustaining a particular practice change

in part to embedding the changes into already existing processes and procedures being used by frontline staff. Strategies to embed change varied from simple adaptations or adjustments to currently used forms and documentation to more elaborate changes to policies and procedures or inclusion of BPG training in new staff orientation.

These findings are consistent with related literature. Greenhalgh et al. (2004 1b) found that any change within a health care organization is more easily achieved and sustained long term when the change has “embeddedness in inter-organizational networks” (p.220). Greenhalgh et al. (2004 1a) further concluded that when “an innovation is adapted to the local context; there is strong evidence that it is more likely to be successfully implemented and sustained” (p. 607). Stirman et al. (2012) and Matthew-Maich et al. (2013) reported similar findings noting that the most common influence on sustained change is the degree to which an innovation or practice change can be modified or customized to fit a specific environment or existing process. Finally, Loman et al. (2010) suggested the importance of ensuring the initial design and adaptation of the practice change fits within an organizations’ exiting infrastructure.

5.1.3 Staff Behaviours: Provision of Rationale and Motivation for the Change

Staff behaviour, the third staff element of the NHS model and its relationship to the long term sustainability of practice changes was found in this study to be dependent on the openness and receptivity to the change of staff and managers, as well as their general understanding about the rationale and motivation behind the change. Results in this study demonstrated that organizations that invested the time early and throughout the implementation phase to ensure staff and managers were on board with the changes and

clear on the rationale behind them reported better overall success with implementation and with sustaining the gains. Various methods and approaches were identified by participants to share the necessary information with staff and managers but no one approach or strategy was noted as more effective (e.g. linked to accreditation, corporate funding, health and safety, linked to broader corporate priorities). Overall, a key finding in this study for use by practice change leaders, is the importance of ensuring point of care staff and managers understand why the change is necessary and are given enough relevant information as to why the change is better than existing practice.

The existing literature on the impact of staff behaviour on the sustainability of a change aligns closely with these findings. Greenhalgh et al. (2004 1a) and Stirnam et al. (2012) concluded that staff's attitude and behaviours toward a change are critical to its success and can be influenced by their level of engagement and understanding of the change. Davies et al. (2006), in their examination of RNAO BPSO's sustainability status after two years post-implementation, found that staff buy-in was a key facilitator to the sustained use of practice and when there was notable staff resistance to a proposed practice change it was identified as a barrier. Matthew-Maich et al. (2013) more specifically noted that the attitudes of frontline managers and leaders toward the change played an equally pivotal role in the successful sustainment of a changed practice.

Greenhalgh et al. (2004 1a), Stetler et al. (2009), Loman et al. (2010) and Matthew-Maich et al. (2013) further conclude the importance of providing staff with the rationale and motivation behind the change. Matthew-Maich et al. (2013) examined effective methods for moving BPGs into practice, finding that nurses need to learn and understand what specifically is involved with the practice change, its relevance and

credibility to their practice, and the BPG's overall benefit to both themselves and their patients. Matthew-Maich et al. (2013) further suggests that if staff are ever to adopt the change, they need to trust the change enough and the rationale behind it to actually get to the pivotal stage of trying the new practice long enough to see its value.

5.1.4 Senior Leadership: Ongoing Fiscal and Human Resource Support

General Study Findings RE: Senior Leadership

Senior leadership, the fourth staff element of the NHS model and its relationship to the long term sustainability of practice changes was found in this study to be dependent on senior leaders' initial and ongoing provision of both fiscal and human supports. More successful participants reported that although having their senior leaders support the projects publically was important, what was more important was ongoing corporate support demonstrated through dedicated budget and staff to ensure the BPGs were being well managed, monitored and sustained. Organizations with dedicated year-to-year funding, staff, and managers devoted to BPG work reported greater long term success in sustaining their BPGs.

Findings in this study once again closely align with the existing research on the influence and impact of senior leadership on sustained change. Davies et al. (2008) suggests that continued support from leadership was the main predictor in how strongly practice changes took hold and spread. Greenhalgh et al. (2004 1b) further concludes that senior management support and continued commitment were a strong indicators of the overall success of an innovation long term. Stetler et al. (2009) and Loman et al. (2010) concluded that both initial and on-going corporate support and funding were necessary in order to ensure adequate staffing and dedicated leadership remained in place to ensure sustained

change. Matthew-Maich et al. (2013) more specifically found the ongoing commitment to sharing of resources and staff expertise by senior leadership was a key factor in moving BPGs into practice. All this supports the assertion that “countless change programs have faltered despite well-argued logic, because people in positions of power and authority wavered in their support” (NHS Institute for Innovation and Improvement 2010, p. 51).

5.1.5 Clinical Leadership: Trusted, Respected and Easily Accessible to Staff

In response to the research question as to the extent factors related to clinical leadership impact sustainability, findings in this study support the conclusion that clinical leaders who are engaged and involved in practice changes, and who are trusted, influential, and respected as clinical resources by frontline staff will have a positive impact on both the initial implementation and long term sustained change. Results in this study illustrated that credible clinical leaders within successful organization, working closely with the frontline staff played a large role in establishing credibility and value to the practice change being proposed. The sustainability research reviewed suggests similar findings. Greenhalgh et al. (2004 1a) found that expert opinion leaders are capable of positively or negatively influencing the outcome of any practice change and concluded that they are a critical factor in the success of efforts to sustain innovation. Stirrman et al. (2012), Umar et al. (2009), Loman et al. (2010) and Davis et al. (2006) all came to similar conclusions agreeing that having skilled and respect subject matter experts available to staff to provide support for practice changes had a positive effect on the long term sustainability of the change.

Participants in this study did not identify specific behaviours or approaches taken by the successful clinical leaders, but rather identified that their success was linked

directly back to their personal credibility as clinicians and their personal dedication and to ensuring the BPGs were being applied effectively. The actions and approach of successful clinical leaders in this study enabled them to break down unique barriers to the change in the settings they were in and enabled them to support staff more effectively. This result implies that practice change leaders should be selective when choosing clinical leaders to support innovations to ensure they have the clinical expertise as well as the necessary problem solving and interpersonal skills necessary to be viewed as credible to effectively support the change. Greenhalgh et al. (2004 1a) came to a similar conclusion stating that it is not enough that they are simply clinical experts but rather that they are viewed by staff in that particular setting with that particular practice change as true opinion leaders and therefore able to influence and support a change in behaviour. Stetler et al. (2009) also noted sustained practice change was more likely with the careful selection of skilled clinicians, well respected by staff with visible and ongoing commitment to the success of the evidence based practice. Matthew-Maich et al. (2013) further reinforces the findings in this study, with the conclusion that the effectiveness of clinical leadership is in their ability to facilitate the translation of the BPGs into practical application in a specific settings, in modeling the behaviour change and in encouraging and supporting staff to safely trial the new practice.

5.2 Summary

The findings in this study confirm what is found in existing literature related to staff within health care organizations and their influence and impact on the sustainability of implemented best practices. This study substantiates the existing literature and serves to validate the staff elements of the NHS Sustainability Model as an effective tool to

guide health care leaders in their efforts to successfully sustain change efforts. Findings also serve to add to the current body of knowledge in this area of study by providing a more detailed understanding of the impact and influence of specific factors within the staff element of the NHS model such as the positive effect of the sustained use of multidisciplinary working groups and champions as well as ongoing access to staff training and resource materials.

5.3 Limitations to Study

This section addresses the strengths and limitations of the study and their potential impact on the findings.

The strength of this study is the fact that all eleven participants involved in the study were BPSO project and/or clinical leads for RNAO BPGs within their organization. Thus, they were participants with high potential for information richness and experience on the subject of sustaining RNAO BPGs and were able to reflect on their experiences and communicate effectively about them. The eleven participants represented ten different and varied health care organizations, six hospital and four community based settings. This varied representation helps to enhance the transferability of the findings, while leaving it to the reader to determine if the context for their own application is similar to participants in this study.

Data were collected using prolonged in depth interviews with practice change leaders with lived experience with the subject of investigation. All eleven participants' willingly shared their insights and experiences using vivid descriptions that were then carefully transcribed, coded and analyzed. Themes and patterns in the data were then viewed and filtered through the lens of the NHS theoretical model to arrive at five key

and concise results about the influence of staff elements of the model on the long term sustainability of practice changes.

Although this study provides insights into the staff factors that influence the sustainability of practice changes in various health care settings and contexts, study limitation must be considered. Both the community and hospital sites represented in this study were all located in Ontario, Canada at a specific period in time. Thus, it is possible that the leadership strategies, processes applied to accommodate practice changes, and the amount of available resources for BPG sustainability could vary across organizations and in different geographical contexts. The organizations studied were all RNAO BPSOs implementing and sustaining BPGs developed by one nursing association so results may not be perceived as applicable to other allied health professionals nor for nurses practicing outside of Ontario.

The data source for this study were limited to self-reports from one or two participants representing and reporting on the sustainability activities within their larger health organization. Therefore, their reports may not fully represent the complete range of activities undertaken by the organizations at the initial implementation stage or the subsequent sustainability stage for the BPGs being discussed in this study. Two of the ten participants were reporting on their experiences with initial BPG implementation that occurred anywhere from three to six years prior to the date of the interview. These participants may have had difficulty recalling the exact details of what was done. However, eight of the participants represented organizations that had been involved with the BPSO program for less than four years and the remaining two for less than two years so their memory for details would be less of a concern. In addition, eight of the eleven

participants had been involved in a leadership role from the early stages of BPG implementation and remained involved in the sustainability phase so this would have mitigated this potential limitation. Participants seemed to have good memory of events that were an important part of their work. Regardless, the thesis used many methods to accurately report the participants' perceptions of their experiences and the experiences of their facilities. And finally, socially desirable responses are possible from the RNAO BPSO leaders selected for the study. The eleven participants may have felt pressure to report on or emphasize the successes and to minimize or negate the perceived failures when reporting on specific issues related to BPG implementation and sustainability activities. However, this is unlikely given the reports from participants of the things that went wrong and the examples shared of the lack of sustained change.

5.4 Implications for Practice and Policy

Study findings supported by previous research findings, can provide practical advice for consideration by leadership within health care organizations that are concerned about the long term sustainability of practice changes. Specific approaches and strategies found to be effective in engaging and involving staff in practice changes were presented and can be translated to others settings. An important implication for this study is related to the need for further development of a model of sustainability that can be used to guide practice change leaders toward the best approach and strategies to use in their practice change efforts. This study has expanded on the staff element of the NHS Sustainability Model and the examples in the findings section provided practical and detailed findings related to staff factors that can either facilitate or hindered the successful implementation

and sustainability of practice changes. Similar work on other parts of the model would be helpful.

It is apparent from the results of this study that the early and sustained involvement, cooperation and motivation of key staff and management at all levels within an organization to help establish goals and priorities and to ensure ownership and compliance with the changes being implemented is of great importance if sustainability is to be achieved. For example, the establishment of multidisciplinary working groups comprised of a combination of well-respected subject matter experts, staff and management to plan, design, and assist in the implementation and ongoing modification of the practice change is a key strategy for successfully sustaining a practice change. Another practical strategy is the ongoing leadership by champions who act as key facilitators with other staff to support practice change beyond the initial implementation phase. It is important to be selective and deliberate when recruiting champions to ensure they are trusted and respected by their peers and to ensure they are well supported and rewarded for their role.

Based on this study's findings and the current literature, early and sustained access to formal education, training and resources for staff and managers plays a large part in the long term sustainability of a practice change, as well as, embedding practice changes into current processes and infrastructure whenever possible to further ensure ongoing use. Practice change leaders need to ensure that both staff and management have easy and ongoing access to the necessary formal training, resources and tools relevant to their current practice and tailored to their work environment to allow them to easily enact the change in practice.

The findings of this study also have practice implications related to staff behaviours and attitudes toward a practice change. Practice change leaders should be aware of the importance of ensuring staff and managers understand the rationale and motivation behind the change. If the time is invested early and often to ensure staff and management understand the reasons behind practice changes, the result is better overall response and compliance from staff and a greater chance of long term sustainability.

Another key finding is the importance of ensuring ongoing and easy access to clinical leaders who are trusted, influential, and respected by staff. Clinical leaders who are engaged and involved in practice changes and take personal ownership and responsibility for the success of a practice change can have a positive impact on sustainability. Practice change leaders once again need to be selective about who they recruit as clinical leaders to ensure they have the necessary credibility with point of care staff and management. They need to be skilled and comfortable with the practice changes and need to have the flexibility to be able to work alongside other health professionals providing hands on training, support and encouragement in the both the early stages of implementation and in the later stages of sustainability.

This study has implications for practice change leaders to consider in relation to policies within health care organizations. Senior leaders need to be aware that ongoing corporate support demonstrated through dedicated fiscal resources to ensure BPGs are being managed, monitored and sustained is important for sustainability. Long term monetary commitment from senior leadership enables managers to dedicate staff and resources to practice change initiatives ranging from technological solutions, to the development of formal training programs that are easy to access on an ongoing basis, to

the development of policies and procedures related to the practice change. Dedicated and ongoing funding signals the importance and priority of a practice change to all staff.

5.5 Implications for Future Research

Much of the research related to sustainability is limited and varied with no identified and consistent working definition or model to guide how it is defined and conceptualized, and therefore studied. In general, more research is needed in this area of study to further refine a working definition of sustainability, to further develop existing sustainability models such as the NHS Model, and to test them in a variety of different settings and contexts to advance the knowledge base in more specific areas of sustainability. More research is also needed to help explain the complex nature of successful adoption of practice changes among health care professionals and the factors that contribute to their sustained use in a variety of practice settings. This type of specific research could allow for the identification of more detailed approaches to implementation that address issues of sustainability in specific contexts and with a sufficient level of operational detail to guide leaders.

This study focused on the staff element of the NHS Sustainability Model and was able to provide support for the importance of the factors related to staff within an organization to the overall success in sustaining practice change. Results provided specific details for practice change leaders to consider initiating and implementing a practice change. However, it was noted that many aspects of the staff element of the NHS model are interrelated and/or codependent on the other two key elements of the model - organizational and process. Future research is needed to test the utility of the whole NHS Model to test the relative importance of each part of the model on

sustainability in a variety of settings. This type of research would deepen the understanding of the model and determine if the development of a sustainability action plan arising from a self-assessment using the model would be valuable to practice change leaders.

5.6 Summary of Implications

This study has clear implications for practice change leadership in terms of practice, policy, as well as research initiatives within health care organizations. Sustaining practice changes for the long term poses many challenges for both leaders and point of care staff and management in health care today. Creating supportive environments and cultures where the application of best practice is the expectation and where systems and resources are in place to support their ongoing use is needed if newly introduced practice changes are to be sustained.

Staff and management need to be provided with clear rationale behind the change and need to be inspired and motivated to make the necessary change in their practice. If they are engaged early and often throughout the change process and are provided with the opportunity to provide feedback and adapt the changes to meet their specific workplace need, sustainability is more likely. The professional development of point of care staff was also found to be of utmost importance to sustainability and demonstrated when organizations provide opportunities to staff to participate in working groups, as subject matter experts, as champions of change in support of their peers and through participation in relevant and site specific education and training. If they are engaged early and given the opportunity to play a meaningful role in the change process, results demonstrated that staff will commit to the proposed changes initially and more likely in the long term. More

research is needed in the area of sustainability and the development of detailed theoretical models and best practice guidelines for leaders in health care to use to successfully manage factors related to staff when implementing and sustaining practice changes in a variety of health care settings.

5.7 Conclusion

This study contributes to our understanding of sustainability and more specifically elements related to staff within an organization that can have a direct impact on whether or not a practice change will be sustained. It is apparent that there are multiple factors related to staff engagement and involvement, staff behaviour and attitudes, as well as senior and clinical leaders' degree of commitment and engagement that have been shown to have a direct impact on the sustainability of a practice change. It is also clear that the degree to which a practice is adopted and sustained by staff is dependent on multiple contextual factors that extend beyond staff to include factors related to the organization itself and the processes that operate within it. More research in the area of sustainability is needed to help develop a common definition and framework in which to then develop evidenced based approaches and strategies for practice change leaders to use in their change efforts to assure long term sustainability. The significance of this study lies in the implications for practice, policy and research about the significance of factors related to staff on the sustainability of practice changes in a variety of health care organizations.

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Appendix A

Email from RNAO to BPSO Leads



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Greetings BPSO Leaders,

I am writing to you on behalf of researchers interested in studying the experiences of RNAO BPSOs in the sustaining of practice changes post initial implementation of BPGs. The study is entitled **Examining Elements of Sustainability in BPSO BPG Implementation** and will be conducted by Tracey Schenck, a Master's student under the leadership and supervision of Dr. Lynn McCleary in the Department of Nursing at Brock University.

As a project or clinical lead you qualify to participate in this qualitative descriptive study aimed at understanding the experiences and perceptions of BPSO leaders in sustaining practice changes two years post initial implementation in a health care setting.

I am writing to you today to ***request your permission/consent to release your BPSO contact information to the researchers*** so they can provide you with more in-depth information about this study so you can make an informed choice as to whether or not you wish to participate. If you agree to have your contact information released to the researcher, I will forward your organization's contact information and my participation in this process will end. All form of communication between the researcher and the RNAO regarding this study will cease at this point. We will have no knowledge of the organizations that have agreed or not agreed to participate in the study.

Your participation in this study would be completely voluntary and in no way part of your BPSO designation or responsibilities. The RNAO will have no knowledge of your participation in this study, nor will we be advised if you and your organization decline to be involved in the study. There will be no negative consequences if you choose to participate or not. The researchers have agreed to remove all organizational and personal identifiers obtained throughout this study and have committed to using general descriptive terms to describe study results to ensure the confidentiality of participating RNAO Spotlight Organizations and their staff who agree to participate in the study.

The results of this study will contribute to the knowledge regarding the sustainability of best practice guidelines and help us to better understand the experience of health care professionals in implementing and sustaining practice changes long term within their organizations. You may find it beneficial to discuss and reflect on your experiences. ***If you want to learn more about the study from the researchers, please reply affirmatively to this e-mail.***

Sincerely,

Heather McConnell

RNAO, BPG Coordinator

Appendix B

Letter of Invitation



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Examining Elements of Sustainability in BPSO BPG Implementation

Health Care Professional Interview Letter of Invitation

Principal Investigator: Dr. Lynn McCleary
Student Investigator: Tracey Schenck

Dear Participant,

You are invited to participate in a study entitled **Examining Elements of Sustainability in BPSO BPG Implementation**. The study is being conducted under the leadership and supervision of Dr. Lynn McCleary, Department of Nursing, Brock University and Tracey Schenck, Student Investigator as part of her research thesis toward a Master's Degree in Applied Health Science from Brock University. You are being asked to participate in this study because of our interest in learning about your experiences as a health care professional (director, manager, practice guideline leader/champion) involved in the implementation and/or sustainability of Registered Nursing Association of Ontario (RNAO) Best Practice Guidelines(BPGs) within your Best Practice Spotlight Organizations (BPSO). Your participation in this study is voluntary and there will be no negative consequences if you choose not to participate. If you wish to withdraw from the study, you may do so at any time. We are planning to conduct 6-10 interviews with various health professionals from a variety of BPSOs.

WHY IS THE STUDY BEING DONE?

The purpose of the study is to gain an understanding of how RNAO BPGs are sustained in practice following the initial implementation within a variety of health care organizations. We are interested in learning about how guidelines are sustained within RNAO Best Practice Spotlight Organizations (BPSO), and the factors that influence the sustainability of practice change two or more years post implementation.

WHAT AM I BEING ASKED TO DO?

Should you choose to participate, you will be asked to participate in one face to face or telephone interview at your place of employment or any other private location of your choosing. The interview will be conducted between (insert month) and (insert month) 2013. The interview will be conducted by Principal Student Investigator, Tracey Schenck. The interviewer will make every effort to complete the interview in 1

A few days in advance of the scheduled interview, you will be asked to complete a short questionnaire (10 questions). The questionnaire can either be emailed and completed electronically or faxed for completion on paper, whichever you prefer. The questionnaire is brief and easy to complete. It was designed to be completed by individuals involved in improvement initiatives like BPG implementation. Your completion of the questionnaire will further assist the researcher in understanding your individual perspective on sustainability efforts within your organization, as well as, helpful in preparing you for the interview and discussion related to sustainability. The completion of the questionnaire is completely voluntary. The interview can proceed without the completion of the questionnaire with no negative consequences.

All information will be kept completely confidential and all identifying information removed from the transcripts. Your privacy will be protected, as no real names of participants of BPSOs will be used in the study. Electronic files will be password protected and stored on a password protected computer.

WHAT ARE THE BENEFITS OF PARTICIPATING IN THIS STUDY?

Your participation in this study will potentially contribute to the existing body of knowledge regarding the sustainability of best practice guidelines and help us to better understand the experience of health care professionals working as BPG leads to implement and sustain practice changes long term within their organizations. You will have an opportunity to express your insights and experiences to someone outside your organization and it will provide you with an opportunity to share them in a way that has the potential to be of benefit to other health professionals which you may find beneficial. It will provide you with an opportunity for reflection on your involvement in the project from a different perspective as well as, the opportunity to share lessons learned related to the long term sustainability of BPG initiatives. The results will be used to assist health care decision-makers, health care professional leaders and policy makers to better understand the complex process involved in the sustaining of BPGs, and to inform more effective and efficient processes and strategies to facilitate guideline sustainability in order to improve health care professional practice and patient outcomes.

WHAT ARE THE RISKS OF PARTICIPATION IN THIS STUDY?

There are no known risks to participating in this study. Every effort will be made to protect (guarantee) your confidentiality and privacy. We will not use your name or any information that would allow you to be identified. All organizational and personal identifiers obtained throughout the interview process and will be removed and researchers will use only general descriptive terms and themes to describe study results. We will select quotes for use in reporting carefully to protect confidentiality, to



keep this in mind when deciding what information you share. In addition, you may feel some discomfort related to some questions being asked, but you can choose not to answer any questions.

WHAT WILL HAPPEN TO MY PERSONAL INFORMATION?

This study will collect your name, position title, age, and gender, level of education, length of time in practice, years of experience with BPG implementation and length of time employed with current BPSO. This information will be kept separate from any interview information which will only be identified with a study number. The only people who will have access to both your names and interview information will be the Principal Investigator, Dr. Lynn McCleary and Student Investigator, Tracey Schenck. This information will be aggregated to describe the study sample. Members of the research team may read your interview transcripts but they will not know who you are. The information will be stored on a password protected computer file in a locked filing cabinet at Brock University. This will be kept for 10 years and then destroyed.

CAN PARTICIPATION END EARLY?

You are free to withdraw from this study at any time. You may stop your interview at any time, or you may choose to answer only certain questions. If you wish to withdraw, contact Dr. McCleary or Tracey Schenck using the telephone numbers provided at the end of this letter. If there is any new information about the study that arises, you will be informed and given the opportunity to decide whether to continue. If you do withdraw, you will be asked whether or not you give permission to use the information collected to that point in time.

WILL RESULTS OF THE STUDY BE PUBLISHED?

Results of this study may be published in professional journals and presented at conferences. Feedback about this study will be available

IF YOU HAVE QUESTIONS ABOUT THE STUDY, WHO SHOULD YOU CALL?

If you have questions about the study, please contact Dr. Lynn McCleary at Brock University, at telephone number 905 688 5550 x5160 or Tracey Schenck, Student Investigator at 905-931-1084. If you have any pertinent questions about your rights as a research participant, please contact the Brock University Research Ethics Officer (905) 688-5550 ext. 3035, reb@brocku.ca.

Thank you,



Appendix C

Informed Consent



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Examining Elements of Sustainability in BPSO BPG Implementation

Health Care Professional Interview Consent Form

Participant:

I have read the information presented in the information letter about a study being conducted by Tracey Schenck. I have had the opportunity to ask questions and all my questions have been answered. I agree to participate in this study and may withdraw from the study at any time. I was given the researcher's contact information and told to contact them at any time should I decide to withdraw from participation. I was informed that it would be possible to remove my data prior to its inclusion in data analysis (about 1 month after the interview) if requested.

I understand that I will receive a signed copy of this form.

Permission to Quote

I hereby give permission for Tracey Schenck to quote responses given during the interview conducted on _____ 2013, as part of Ms. Schenck's Master's thesis research as signed below.

I understand there will be no information used that would in any way identify me as the person who provided the information. I understand that the researcher will make every effort to preserve the confidentiality of all information shared by removal of all organizational and/or personal identifiers and will commit to using general descriptive terms to describe study results whenever possible. However, I recognize and accept the possible limitations to confidentiality that may result from a having known and shared association with RNAO and other Spotlight Organizations participating in the study and will keep this in mind when providing responses to the questions asked.

I agree that the interview can be digitally recorded. Yes No

I would like to receive a summary of the study's results Yes No
If yes, where would you like the results sent:

Email: _____

Mailing Address: _____

Participants Name: _____

Signature: _____

Date: _____

Person obtaining consent:

I have discussed this study in detail with the participant. I believe the participant understands what is involved in this study.

Name, Role in Study: _____

Signature: _____

Date: _____

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please contact Dr. Lynn McCleary at Brock University, at telephone number 905 688 5550 x5160 or Tracey Schenck, Student Investigator at 905-931-1084. This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University (File: 13-023 MCCLEARY). If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, reb@brocku.ca.

Thank you for your assistance in this project. Please keep a copy of this form for your records.



Appendix D

Script to Read Prior to Interview



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Department of Nursing

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Examining Elements of Sustainability in BPSO BPG Implementation **Script Read to Participant Prior to Interview BPSO Health Professionals**

Thank you for your participation in today's interview designed to gain understanding of how best practice guidelines are sustained long term within health care organization. I am interested in learning about your experiences and views as a BPG project and/or clinical lead, on elements that have contributed to the sustainability of BPGs within your organization post implementation.

As a participant, you will be asked a series of semi-structured interview questions related to your involvement with RNAO BPG implementation and/or sustainability efforts. The interview will take approximately 45-60 minutes. If the session appears to be going over the 60 minute mark, I will stop the interview and offer you the choice to complete it or rescheduled another time to complete it. The interview will be audio-recorded and I will take notes during our discussion. The interview will be recorded, transcribed and analyzed. Upon request, I will forward you a copy of the transcript and subsequent analysis for your review prior to presenting the results as part of my research thesis.

All information shared will be considered confidential and your name and workplace will not be included or associated with the data collected, however, with your permission, anonymous quotations may be used in support of general themes in the findings. During the interview and transcription process only first names will be used. All organizational and personal identifiers obtained throughout the interview process and will be removed and we will use only general descriptive terms and themes to describe study results to ensure the anonymity of both you and your organizations. However, it may be possible, given the cohesive nature of the RNAO BPSO community, that some readers may be able to tell which BPSO you are affiliated with so keep this in mind when deciding what information you share. In addition, you may feel some discomfort related to some questions being asked, but you can choose not to answer any questions.

Access to the data collected will be restricted to include only my faculty advisor and a research assistant who will assist in the transcription process. All data collected will be securely stored during and following the study on a password protected computer file in a locked filing cabinet at Brock University. Records from this study will be safely and securely stored at Brock University for 10 years and then destroyed.

As a participant you have the right to withdraw from participation at any time during the interview and have the right to request all data related to the interview be destroyed at any time prior to its inclusion in data analysis (about 1 month after the interview).

This study has been reviewed and received ethics clearance through the Research Ethics at Brock University. If you have any questions or concerns related to this interview or require more information please contact myself, Tracey Schenck or my faculty advisor Lynn McCleary at Brock University.



Appendix E

Interview Guide for Interviews with BPSO Leads



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Examining Elements of Sustainability in BPSO BPG Implementation Interview Guide for Interviews with BPSO Health Professionals

Hello _____

My name is Tracey Schenck. I am a Master's student at Brock University. I am the Student Investigator on the study entitled **Examining Elements of Sustainability in BPSO BPG Implementation**.

The purpose of the study and the purpose of the interview are to gain an understanding of how RNAO BPGs are sustained in practice following the initial implementation within a variety of health care organizations.

Do you have any questions about the interview?
(I will start the digital recorder now)

I am interest in learning about your experiences as a health care professional (director, manager, practice guideline leader/champion) involved in a leadership role in the implementation and sustainability of the Registered Nursing Association of Ontario (RNAO) Best Practice Guidelines (BPGs) within your organization.

For the purposes of this study, "**sustainability**" refers to "the degree to which an innovation continues to be used after initial efforts to secure adoption is completed" OR "as the continued implementation of a practice at a level of fidelity that continues to produce intended benefits."

Introduction/Background

First I would like to collect some background information.

Tell me about your role and responsibilities within the organization.

Q1. Which of the RNAO BPGs were you involved in implementing and/or involved in sustaining within your organization?

Q2. What is your understanding of the reasons why the **(guideline name)** was initially implemented within your organization?

Q3a. What were your project goals and objectives before implementation?

Q3b. What was the desired outcome for the **(guideline name)** project?

Q4. Describe the guideline recommendations, practice changes and/or tools that were implemented with the **(guideline name)** project

Q5. Describe briefly the steps and approaches taken to sustain the use of the **(guideline name)** within your organization? (id champions, developed educational and training material, creation and use of BPG tools, development of P&Ps, chart audits, follow -up staff and patient surveys etc.)

Q6. Describe how you perceive this **(guideline name)** to have been sustained in your organization since initially implemented two or more years ago?

NHS Sustainability Model Staff Component and Elements

Element #1: Staff Involvement and Training

Q7a. Describe the types of activities involving staff that took place before and during the initial implementation stage? (working groups, staff input on development of new processes, small scale pilot, PDSA cycles, staff feedback solicited etc.)

Q7b. Describe the type of training, tools and/or educational materials were provided to staff for the initial BPG implementation and subsequent training needs of staff?

Q7c. To what degree was staff involved in the initial selection and/or implementation of the selected BPG (guideline name)?

Element #2: Staff Behaviours Toward Sustaining the Change

Q8a. Describe the general climate and/or staff attitudes toward the (guideline name) project?

Q8b. From your perspective, is staff regularly encouraged to share their ideas for process improvements and change?

Q8c. If so, in your experience, is their feedback acted upon and applied to further improve process changes?

Q8d. In your opinion, does staff believe that the changes implemented with the (guideline name) are a better way of doing things than previously?

Element #3: Senior Leadership Engagement and Support

Q9a. Are your senior leaders involved and/or visibly supportive of the (guideline name) BPG project?

Q9b. Does staff have opportunity to share information or feedback to your senior leaders on the impact to their work of process and practice changes?

Q9c. Do your senior leaders use their influence to communicate with staff about the impact of the BPG on organizational outcomes and performance? and

Element #4: Clinical Leadership Engagement and Support

Q10a. Were clinical leaders involved in initial implementation?

Q10b. Do they continue to be involved in ongoing training and sustainability activities?

Q10c. How were the clinical and project leads selected to be involved in the project?

Q10d. In your opinion, are the clinical leads visible and respected by staff?

Q10e. Do you perceive them to have influence on staff and their practice?

Q10f. Does staff regularly seek input and advice from clinical leaders?

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Barriers and Facilitators of Sustainability

Q11a. What did you perceive as the barriers to sustainability of the (guideline name)?

Q11b. What did you perceive to be facilitators to sustainability of the (guideline name)?

Lessons Learned/Wrap Up

Q12a. What advice would you give to someone in a similar position to your own charged with sustaining the use of BPGs in a health care setting?

Q12b. Is there anything else you would like to share with us regarding the spread of this guideline?

Thank you very much for participating in this interview and your time today.



Appendix F

Telephone Script to Recruit



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Examining Elements of Sustainability in BPSO BPG Implementation Telephone Script to Recruit Health Professionals

Hello _____

My name is Tracey Schenck. I am the Student Investigator on the study entitled **Examining Elements of Sustainability in BPSO BPG Implementation**. You may recall receiving an email recently from BPSO contact, Heather McConnell at RNAO regarding this study. You gave RNAO consent to release your contact information so investigators on this study could contact you and provide more information on the study and recruit you as a participant in the study.

Do you have time to hear more about the study now?

If no,

What time would be more convenient?

If yes,

Thank you, I'll tell you about it. Please ask questions along the way. This study is being conducted under the leadership and supervision of Dr. Lynn McCleary, Department of Nursing, Brock University and myself, Tracey Schenck, Student Investigator. This study and its' results will become the basis of my Master's thesis in Applied Health Science from Brock University.

I am contacting you to participate in this study because of my interest in learning about your experiences in a leadership role in the implementation and sustainability of RNAO BPGs within your organization.

The purpose of the study is to gain an understanding of how RNAO BPGs are sustained in practice following the initial implementation within a variety of health care organizations. I am interested in learning about how guidelines are sustained within RNAO Best Practice Spotlight Organizations (BPSO), and the factors that influence the sustainability of practice change two or more years post implementation.

You are invited to participate in either a face to face or telephone interview. The interview will last approximately one hour and will be conducted between (month) and (month) 2013. The interview will be conducted by me, the Student Investigator. I will ask about your experiences and perceptions of best practice sustainability and the factors you believe have influenced the sustainability of practice changes within your organization.

In addition, a few days in advance of the scheduled interview, I will also request that you complete a short questionnaire (10 questions). The questionnaire can either be emailed and completed electronically or faxed to you completion on paper, which ever you prefer. The questionnaire is very brief and easy to complete. It was designed to be completed by individuals involved in improvement initiatives like BPG implementation. It's completion will further assist me in understanding your individual perspectives on sustainability efforts within your organization, as well as, prepare you in advance for the interview and discussion we will have related to sustainability. The completion of the questionnaire is voluntary and the interview can proceed without it's completion.

Your participation in this study is completely voluntary. Choosing to participate in the study will in no way affect your work at _____ (name of agency). Any information that you share with me will be kept confidential. There are no known risks to participating in this study. Every effort will be made to protect (guarantee) your confidentiality and privacy. We will not use your name or any information that would allow you to be identified. All organizational and personal identifiers obtained throughout the interview process and will be removed and researchers will use only general descriptive terms and themes to describe study results.

This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University [insert file #]. If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, reb@brocku.ca.

If you have any questions about this study or require further information, please contact Dr. Lynn McCleary at Brock University, at telephone number 905 688 5550 x5160 or Tracey Schenck, Student Investigator at 905-931-1084.

Are you interested in participating in this study?

If no,

Thank you for your time.

If yes,

I will need your permission to begin arranging the in-person or telephone interview. I will send you the consent form to review and instructions on how to return it to me prior to the interview depending on the whether the interview is conducted face to face or over the phone. At the time of the interview, I will review an informed consent form and ask that you return it to me prior to the interview. If the interview takes place in person, I will ask you to sign the consent prior to commencement of the interview. If a telephone interview is arranged, I will send you an electronic version of the consent form and ask that you scan the signed form and email it back to

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me prior to commencement of the interview. You will then be asked detailed questions about your involvement and role in sustainability activities in relation to RNAO BPGs within your organization.

Do you have any questions?

Do you have a preference for dates and times for an interview?

Preferred Dates and Times:

Thank you so much for your time and interest in this study.



Appendix G

Informed Verbal Consent



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Examining Elements of Sustainability in BPSO BPG Implementation

Health Care Professional Interview Informed Verbal Consent Form by Telephone

This is the telephone script to be read to participant being interviewed by phone in order to gain their verbal consent to participate in the interview.

Hello, my name is Tracey Schenck. I am a Brock University Masters' Student conducting research under the supervision of Dr. Lynn McCleary from the Faculty of Nursing.

I had previously sent you a letter of invitation requesting your participation in my study aimed at learning more about your experiences as a health care professional and practice change leader involved in the implementation and/or sustainability of Registered Nursing Association of Ontario (RNAO) Best Practice Guidelines(BPGs) within your Best Practice Spotlight Organizations (BPSO).

Did you have an opportunity to read this letter of invitation? Y N

If no: Would you like me to read it to you now? (Read the letter of invitation to the participant and proceed to next question.)

If yes: Thank you. Do you have any questions about the study before we get started?

Before we proceed with today's telephone interview I will need to gain your verbal consent to participate in this research study. I have a few questions I will need to ask in order to gain your verbal consent.

Permission to Participate

Do you voluntarily agree to participate in this study? Y N

Are you aware that you may withdraw from participation in the study at any time? Y N

Are you aware that you can request to have all your data removed prior to its inclusion in the data analysis up to one month after today's interview? Y N

Do you still have a copy of the letter of invitation? It has my contact information and the contact information of my research supervisor where we can be reached at any time should you decide to withdraw from participation. Y N

If no: Would you like me to resend the letter of invitation to you before we proceed?
Y N

If yes: Resend letter and ask if participant wants to proceed once they receive a copy of the letter of invitation and reschedule for another time.

If no: Okay, I will send you another copy for your records after our interview. Proceed with verbal consent process.

Permission to Quote

Do you give me, Tracey Schenck, permission to quote responses given during the interview conducted on _____ 2013, as part of my Master's thesis research? Y N

Do you understand that there will be no information used that would in any way identify you as the person who provided the information? Y N

Do you understand that as the researcher I will make every effort to preserve the confidentiality of all information shared by removal of all organizational and/or personal identifiers and will commit to using general descriptive terms to describe study results whenever possible? Y N

Do you recognize and accept the possible limitations to confidentiality that may result from having known and shared associations with RNAO and other Spotlight Organizations participating in the study and will keep this in mind when providing responses to the questions asked? Y N

Do you recognize that this will be an opportunity to express your insights and experiences with the researcher in a way that has the potential to be of benefit to other health professionals? Y N

Do you understand that participation will provide you with an opportunity for reflection on your own involvement in the project, as well as, the opportunity to share lessons' learned related to the long term sustainability of BPG initiatives that will be used to assist decision-makers and health care leaders to better understand the complex process of sustainability? Y N

Permission to Record

Do you agree to the digital recording of this interview? Y N

Do you wish to receive a summary of the study's results? Y N
If yes, where would you like the results sent?

Email: _____

Mailing Address: _____

CONTACT INFORMATION AND ETHICS CLEARANCE

If you have any questions about this study or require further information, please do not hesitate to contact Dr. Lynn McCleary at Brock University or me, Tracey Schenck.



This study has been reviewed and received ethics clearance through the Research Ethics Board at Brock University (File: 13-023 MCCLEARY). If you have any comments or concerns about your rights as a research participant, please contact the Research Ethics Office at (905) 688-5550 Ext. 3035, reb@brocku.ca.

Thank you for granting me verbal consent to interview you today.

Person obtaining verbal consent:

Participants Name: _____

I have discussed this study in detail with the above participant. I believe the participant understands what is involved in this study.

Signature: _____

Date: _____



Appendix H

NHS Sustainability Model Self-Assessment Tool



Faculty of Applied Health Sciences
Department of Nursing

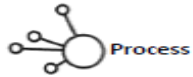
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Process

Choose the factor level that comes closest to your situation and tick the box to the left of it

Factor description	Identity (X)	Factor Level
Benefits beyond helping patients <ul style="list-style-type: none"> • In addition to helping patients, are there other benefits? • For example, does the change reduce waste or avoid duplication? • Will it make things run more smoothly? • Will staff notice a difference in their daily working lives? 	a. <input type="checkbox"/>	We can demonstrate that the change has a wide range of benefits beyond helping patients, for example by reducing waste, creating efficiency or making people's jobs easier.
	b. <input type="checkbox"/>	We can demonstrate that the change has some benefits beyond helping patients such as reducing waste and making jobs easier, but not a wide range.
	c. <input type="checkbox"/>	We can demonstrate that the change has one or two benefits beyond helping patients.
	d. <input type="checkbox"/>	The benefits that we have identified are only directly related to helping patients. We have not identified any other benefits that this initiative could bring.
Credibility of the benefits <ul style="list-style-type: none"> • Are benefits to patients, staff and the organisation visible? • Do staff believe in the benefits? • Can all staff clearly describe the full range of benefits? • Is there evidence that this type of change has been achieved elsewhere? 	a. <input type="checkbox"/>	Benefits of the change are widely communicated, immediately obvious, supported by evidence and believed by stakeholders. Staff are able to fully describe a wide range of intended benefits for this initiative.
	b. <input type="checkbox"/>	Benefits of the change are not widely communicated or immediately obvious even though they are supported by evidence and believed by stakeholders.
	c. <input type="checkbox"/>	Benefits of the change are not widely communicated or immediately obvious even though they are supported by evidence. They are not widely believed by stakeholders.
	d. <input type="checkbox"/>	Benefits of the change are not widely communicated, they are not immediately obvious, nor are they supported by evidence or believed by stakeholders.



Process

Choose the factor level that comes closest to your situation and tick the box to the left of it

Factor description	Identity (X)	Factor Level
Adaptability of improved process <ul style="list-style-type: none"> Can the new process overcome internal pressures, or will this disrupt the change? Does the change continue to meet ongoing needs effectively? Does the change rely on a specific individual or group of people, technology, finance, etc, to keep it going? Can it keep going when these are removed? 	a. <input type="checkbox"/>	The improved process can adapt to the link in with and even support other organisational changes. It would not be disrupted if specific individuals or groups left the project its focus will continue to meet the improvement needs of our organisation.
	b. <input type="checkbox"/>	The improved process can be adapted to support wider organisational change but it would be disrupted if specific individuals or groups left the project. Elements of this work will continue to meet our organisations improvement needs.
	c. <input type="checkbox"/>	It would be difficult to adapt the new process to other organisational changes. It would cause disruption if specific individuals or groups left the project.
	d. <input type="checkbox"/>	The new process could not adapt if there was any other organisational change happening and it would be disrupted if specific individuals or groups left.
Effectiveness of the system to monitor progress <ul style="list-style-type: none"> Does the change require special monitoring systems to identify and continually measure improvement? Is there a feedback system to reinforce benefits and progress, and initiate new or further action? Are mechanisms in place to continue to monitor progress beyond the formal life of the project? Are the results of this change communicated to patients, staff, the organisation and the wider healthcare community? 	a. <input type="checkbox"/>	There is a system in place to provide evidence of impact, including benefits analysis, monitor progress and communicate the results. This is set up to continue beyond the formal life of the project.
	b. <input type="checkbox"/>	There is a system in place to provide evidence of impact, including benefits analysis, monitor progress and communicate the results. This is not set up to continue beyond the formal life of the project.
	c. <input type="checkbox"/>	There is a system in place to provide evidence of impact, and monitor progress. However, none of this information is communicated more widely than the core project team. The measurement system is not set up to continue beyond the formal life of the project.
	d. <input type="checkbox"/>	There is only a very patchy system to monitor progress and this will end at the same time as the project. There is no system to communicate the results.





Staff

Choose the factor level that comes closest to your situation and tick the box to the left of it

Factor description	Identity (X)	Factor Level
Staff involvement and training to sustain the process <ul style="list-style-type: none"> Do staff play a part in innovation, design and implementation of the change? Have they used their ideas to inform the change process from the beginning? Is there a training and development infrastructure to identify gaps in skills and knowledge, and are staff educated and trained to take the change forward? 	a. <input type="checkbox"/>	Staff have been involved from the beginning of the change process. They have helped to identify any skills gaps and have been able to access training and development so that they are confident and competent in the new way of working.
	b. <input type="checkbox"/>	Staff have been involved from the beginning of the change process and have helped to identify skills gaps but they have not had training or development in the new way of working.
	c. <input type="checkbox"/>	Staff have not been involved from the beginning of the change but they have received training in the new way of working.
	d. <input type="checkbox"/>	Staff have not been involved from the beginning of the change process and have not had training or development in the new way of working.
Staff behaviours toward sustaining the change <ul style="list-style-type: none"> Are staff encouraged and able to express their ideas regularly throughout the change process and is their input taken on board? Do staff think that the change is a better way of doing things that they want to preserve for the future? Are staff trained and empowered to run small-scale tests (POSA) based on their ideas, to see if additional improvement should be recommended? 	a. <input type="checkbox"/>	Staff are able to share their ideas regularly and some of them have been taken on board during the project. They believe that the change is a better way of doing things and have been empowered to run small scale test cycles (Plan, Do, Study, Act).
	b. <input type="checkbox"/>	Staff are able to share their ideas regularly and some of them have been taken on board during the project. They believe that the change is a better way of doing things. Staff do not feel empowered to run small scale test cycles (Plan, Do, Study, Act).
	c. <input type="checkbox"/>	Staff are able to share their ideas regularly but none seem to have been taken on board during the project. They don't think that the change will be a better way of doing things. They don't feel empowered to run small scale test cycles (Plan, Do, Study, Act).
	d. <input type="checkbox"/>	Staff do not feel they have been able to share their ideas. They do not believe that the change is a better way of doing things and they have not been empowered to run small scale test cycles (Plan, Do, Study, Act).





Staff

Choose the factor level that comes closest to your situation and tick the box to the left of it

Factor description	Identity (X)	Factor Level
Senior leadership engagement and support <ul style="list-style-type: none"> Are the senior leaders trusted, influential, respected and believable? Are they involved in the initiative, do they understand it and do they promote it? Are they respected by their peers and can they influence others to get on board? Are they taking personal responsibility to help break down barriers and are they giving time to help ensure the change is successful? 	a. <input type="checkbox"/>	Organisational leaders are highly involved and visible in their support of the change process. They use their influence to communicate the impact of the work and to break down any barriers. Staff regularly share information with and actively seek advice from leaders.
	b. <input type="checkbox"/>	Organisational leaders are highly involved and visible in their support of the change process. They use their influence to communicate the impact of the work and to break down any barriers. Staff typically don't share information with, or actively seek advice from leaders.
	c. <input type="checkbox"/>	Organisational leaders are somewhat involved but not highly visible in their support of the change process. They use their influence to communicate the impact of the work but cannot be relied upon to break down any barriers if things get difficult. Staff typically don't share information with, or actively seek advice from leaders.
	d. <input type="checkbox"/>	Organisational leaders are not involved or visible in their support of the change process. They have not used their influence to communicate the impact of the work or to break down any barriers. Staff typically don't share information with, or actively seek advice from leaders.
Clinical leadership engagement and support <ul style="list-style-type: none"> Are the clinical leaders trusted, influential, respected and believable? Are they involved in the initiative, do they understand it and do they promote it? Are they respected by their peers and can they influence others to get on board? Are they taking personal responsibility to help break down barriers and are they giving time to help ensure the change is successful? 	a. <input type="checkbox"/>	Clinical leaders are highly involved and visible in their support of the change process. They use their influence to communicate the impact of the work and to break down any barriers. Staff regularly share information with and actively seek advice from clinical leaders.
	b. <input type="checkbox"/>	Clinical leaders are highly involved and visible in their support of the change process. They use their influence to communicate the impact of the work and to break down any barriers. Staff typically don't share information with, or actively seek advice from clinical leaders.
	c. <input type="checkbox"/>	Clinical leaders are somewhat involved but not highly visible in their support of the change process. They use their influence to communicate the impact of the work but cannot be relied upon to break down any barriers if things get difficult. Staff typically don't share information with, or actively seek advice from clinical leaders.
	d. <input type="checkbox"/>	Clinical leaders are not involved or visible in their support of the change process. They have not used their influence to communicate the impact of the work or to break down any barriers. Staff typically don't share information with, or actively seek advice from clinical leaders.





Organisation

Choose the factor level that comes closest to your situation and tick the box to the left of it

Factor description	Identity (X)	Factor Level
Fit with the organisation's strategic aims and culture <ul style="list-style-type: none"> Are the goals of the change clear and shared? Are they clearly contributing to the overall organizational strategic aims? Is improvement important to the organization and its leadership? Has the organization successfully sustained improvement in the past? 	<div>a. <input type="checkbox"/></div> <div>b. <input type="checkbox"/></div> <div>c. <input type="checkbox"/></div> <div>d. <input type="checkbox"/></div>	<p>The goals of the change are clear and have been shared widely. They are consistent with and support the organisation's strategic aims for improvement. The organization has demonstrated successful sustainability of improvements before and has a 'can do' culture.</p> <p>The goals of the change are clear and have been shared widely. They are consistent with and support the organisation's strategic aims for improvement. The organization has not demonstrated success in sustaining previous improvements and does not have a 'can do' culture.</p> <p>The goals of the change are clear and have been shared widely. They have not been linked with the organisation's strategy so we don't know if they support any organizational aims for improvement. The organization has not demonstrated success in sustaining previous improvements and does not have a 'can do' culture.</p> <p>The goals of the change are not really clear and they have not been shared widely. They have not been linked with the organisation's strategy so we don't know if they support any organizational aims for improvement. The organization has not demonstrated success in sustaining previous improvements and does not have a 'can do' culture.</p>
Infrastructure <ul style="list-style-type: none"> Are the staff fully trained and competent in the new way of working? Are there enough facilities and equipment to support the new process? Are new requirements built into job descriptions? Are there policies and procedures supporting the new way of working? Is there a communication system in place? 	<div>a. <input type="checkbox"/></div> <div>b. <input type="checkbox"/></div> <div>c. <input type="checkbox"/></div> <div>d. <input type="checkbox"/></div>	<p>Staff are confident and trained in the new way of working. Job descriptions, policies and procedures reflect the new process and communication systems are in place. Facilities and equipment are all appropriate to sustain the new process.</p> <p>Staff are confident and trained in the new way of working. However, job descriptions, policies and procedures do not reflect the new process. Some communication systems are in place. Facilities and equipment are all appropriate to sustain the new process.</p> <p>Staff are confident and trained in the new way of working. However, job descriptions, policies and procedures do not reflect the new process, and there are no communication systems to adequately support the new process. Facilities and equipment are not appropriate to sustain the new process.</p> <p>Staff have not been trained in the new process and are not confident in the new way of working. Job descriptions, policies and procedures do not reflect the new process, and there are no communication systems to adequately support the new process. Facilities and equipment are not appropriate to sustain the new process.</p>



Appendix I

Guide to Memoing Post Interview



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Examining Elements of Sustainability in BPSO BPG Implementation

Guide to Memoing Post Interview with BPSO Health Professionals

Participant ID:

Date Pre-Interview Contact:

Completion of Self-Assessment Tool: Y or N

Date of Interview:

- 1) What were your main impressions of the interview?
- 2) What were your main impressions of the participant?
- 3) What were the main issues or themes that struck you during this interview?
- 4) Was the participant knowledgeable on the subject of sustainability?
- 5) Were they involved enough in sustainability efforts to comment?
- 6) What were their main impressions/perceptions of sustainability of the BPG in general?
- 7) What were their main impressions/perceptions of sustainability efforts within their organization?
- 8) Did these impressions align with the NHS Model key elements?
- 9) Summarize the information you got on each of the target questions during this interview:

Question

Information

- 10) Summarize the information you did not get on each of the target questions during this interview:

Question

Information

- 11) Did they offer any new insights or thoughts not yet considered?
- 12) Did anything strike you as salient, interesting, illuminating or important during this interview?

Appendix J
List of Predetermined Codes and Definitions

Codebook: Predetermined Codes and Definitions	
Code	Brief Definition
Staff Elements	
Training and Involvement	Staff have been involved from the beginning of change and have been adequately trained to sustain the improved process.
S-TI: WG	working groups - play part in innovation, design, implementation of change
S-TI: CH	champions - involved in education, training, development of staff
S-TI: SF	staff feedback - ideas used to inform change process, staff reps on BPG committees
S-TI: PDSA	pilot/PDSA - small trial prior to full implementation
S-TI : TR	training
Behaviours	Staff feel empowered as part of the change process and believe the improvement will be sustained.
S-B: ATT	attitudes toward change - staff think change is better way of doing things
S-B: CLI	climate for change
S-B: SH	encouraged to share ideas - staff input taken on board
S-B: SUPMA	visible and/or supportive management

Senior Leadership	Organizational leaders take responsibility for efforts to sustain the change process, staff generally share information with, and actively seek advice from the leader.
S-SL: VIS	visible support - involved/promotes change
S-SL: FEED	feedback opportunities
S-SL: OUT	results/outcomes shared to non specific audiences (e.g. board members, web sites etc)
Clinical Leadership	Clinical leaders take responsibility for efforts to sustain the change process, staff generally share information with, and actively seek advice from, the leader.
S-CL: INVOL	involvement at implementation - understand change and promote new processes
S-CL: VIS	visible to staff - taking personal responsibility to ensure change takes hold
S-CL: SME	clinical experts/SME - seen and used as clinical resource
S-CL: RESP	respected by staff - trusted/influential

Appendix K

List of Predetermined and Emerging Codes and Definitions

Codebook: Predetermined & Emerging Codes and Definitions	
Code	Brief Definition
Staff Elements	
Involvement	Staff have been involved from the beginning of change and have had opportunity to provide input and feedback to sustain the improved process.
S-TI: WG	working groups - play part in innovation, design, implementation of change
S-TI: CH	champions - involved in education, training, development of staff
S-TI: SF	staff feedback - ideas used to inform change process, staff reps on BPG committees
S-TI: PDSA	pilot/PDSA - small trial prior to full implementation
S-TI: OUT	results/outcomes shared with internal frontline staff and management
Training	Staff have been adequately trained and educated to sustain the improved process.
S- TI: INSTRU (new emerging code)	instructor - centered training
S - TI: EXP (new emerging code)	experiential learning training (trial and error - no formal instruction)
S - TI: PEER (new emerging code)	peer teaching - on the job, preceptor

S- TI: SELF-DIR (new emerging code)	self-directed learning - on-line module
Training (continued)	Staff have been adequately trained and educated to sustain the improved process.
S: TI: ORIENT (new emerging code)	training built in to new staff orientation, mandatory training)
S: TI: TOOLS (new emerging code)	tools provided to enhance learning/understanding (power point, cheat sheets, lanyards, reminders, posters, prompts, forced functions in e-documentation)
S: TI: ONGOING (new emerging code)	training continued on a regular or ongoing basis - education was offered at frequent intervals or as required by staff
Behaviours	Staff feel empowered as part of the change process and believe the improvement will be sustained.
S-B: ATT	attitudes toward change - staff think change is better way of doing things
S-B: CLI	climate for change
S-B: SH	encouraged to share ideas - staff input taken on board
S-B: SUPMA	visible and/or supportive management
S-B: RECOG(new emerging code)	celebrate success/share stories
Senior Leadership	Organizational leaders take responsibility for efforts to sustain the change process, staff generally share information with, and actively seek advice from the leader.
S-SL: VIS	visible support - involved/promotes change
S-SL: FEED	feedback opportunities

S-SL: OUT	results/outcomes shared to non specific audiences (e.g. board members, web sites etc)
S-SL: FIN SUPP (new emerging code	ongoing support past implementation stage - financial resources, steering committee, BPSO lead
Clinical Leadership	Clinical leaders take responsibility for efforts to sustain the change process, staff generally share information with, and actively seek advice from the leader.
S-CL: INVOL	involvement at implementation - understand change and promote new processes
S-CL: VIS	visible to staff - taking personal responsibility to ensure change takes hold
S-CL: SME	clinical experts/SME - seen and used as clinical resource
S-CL: RESP	respected by staff - trusted/influential